

Administrative Procedure

PRC-PRO-WKM-12115 Work Management

Revision 0, Change 7

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Project: CH2M HILL Plateau Remediation Company
Topic: Work Management

Technical Authority: S.J. Gray Functional Manager: T.D. Jarecki

Administrative Use



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CHANGE SUMMARY

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Description of Change

Rev 0-7:

- CR-2010-0160 action #47 include work site vehicle hazards and related criteria in work planning section (section 3.2.3.21)
- CR-2009-0881 action #2 require FWS to complete the final closeout activities no more than 30 days after the work has been performed or obtain management concurrence for a new date (step 3.2.6.1)
- CR-2009-0881 action #5 strengthen guidance in the planning process to appropriately divide or consolidate similar work within a single package, and ensure closure elements (step 3.2.3.5 last bullet) and ensure that required signatures and data are included when presenting the work package for closeout (3.2.5.8.e, 3.2.6.1 new bullet).
- CR-2009-2043 Action #7 implement a process to ensure that changes to the normal operating status of facility systems are identified and addressed during work planning 9step 3.2.3.10)
- CR-2009-2356 Action #5 clarify requirements and expectations for documentation of electrical safety elements specified in NFPA 70E 2009. Adjusted some of the steps that were added in rev 0-4 based on the effectiveness review for those actions; changes. Steps 3.2.3 and Appendix E. Form A-6005-322 has also been updated.
- Updated Appendix F info for PFP per ECO input.
- CR-2010-01674 Action #17 Updated Appendix H to clarify relationship between Construction management processes and CHPRC Work Management processes. This action also includes changes to other procedures – see CRRS for details.
- Clarified the minimum review requirements for review of changes to planned work instructions – DA/TA (or PM), FWS and RA.

Rev 0-6:

- Insert language to describe MOA with MSA related to responsibilities during field work utilizing MSA employees (CR-2009-2123, 2154).
- Correct reference to CHPRC Welding Manual that was recently changed.
- Insert new Appendix J related to skill-based work in beryllium facilities and update CHPRC Be procedure references.
- Add a second category of Release Authority designation. These people do not release work at facilities and do not serve LOTO Controlling Organization functions.

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1.0 INTRODUCTION

1.1 Purpose

This procedure details the work management process for initiating, authorizing, performing, and conducting field work within the scope of the CH2M HILL Plateau Remediation Company (CHPRC). This procedure is not an implementing document for the requirements of DOE/RW-0333P, Office of Civilian Radioactive Waste Management (OCRWM), *Quality Assurance Requirements and Description* (QARD).

1.2 Scope

This Level 2 Management Control Procedure is applicable to field work performed at locations under the responsibility of the CH2M HILL Plateau Remediation Company (CHPRC), regardless of who is performing the work, and to work performed according to CHPRC work documents, regardless of the location.

Field Work is defined as a work activity performed on site within the scope of the CHPRC excluding administrative office activities or work performed to approved operating documents (e.g., radiation protection, and Operations).

Field work includes repair, replacement or alteration of physical assets or property including rental and other portable powered equipment performed in CHPRC controlled nuclear and non-nuclear facilities and equipment, shop fabrication, environmental restoration (ER), and deactivation and decommissioning (D&D or D4) work.

1.3 Applicability

CHPRC-performed construction is conducted through the Engineering, Procurement and Construction (EPC) Project. EPC-performed construction projects are subject to this procedure and respective responsibilities between the facilities and construction, or between projects, are typically agreed upon through a Construction Work Authorization Envelope (CWAE) or Memorandum of Understanding (MOU). Work instructions are required for this type of work as described in Appendix H.

Work planning and execution requirements for contracted work activities are developed in accordance with Appendix H as determined by the Buyer's Technical Representative (BTR) in consultation with a CHPRC Work Management Representative (WMR). The requirements that are developed will be described in the resulting Statement of Work (SOW).

This document does not apply to requests to fabricate items off-site, but does apply if those fabricated items will be subsequently installed at a location within the CHPRC contract. See the PRC Procurement web site for guidance concerning what fabrication work may be performed on-site vs. off-site and for fabrication services process links.

This document does not describe the use of computer software tools or forms associated with the software that are used in conjunction with the work management process.

1.1 Implementation

This procedure is effective upon publication.

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2.0 RESPONSIBILITIES

All responsibilities are captured in the process table actionee column. Work Planners, Work Planning Managers and Release Authorities must all complete qualification or designation programs. See details in Appendix I.

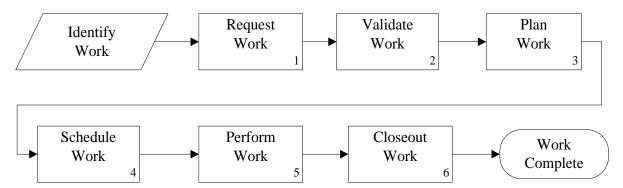
3.0 PROCESS

Process maps are used in each section to illustrate the movement of work through the process with implementing instructions specified below the process maps. The work management process definition starts with a Level 1 Process Map that defines the process at a high level and identifies how Integrated Safety Management System (ISMS) (See PRC-MP-MS-003, Integrated Safety Management System/Environmental Management System Description) core functions are applied. A Process Map is provided for each major functional activity. Appendix A describes the symbol logic for the process maps.

Key terms are defined in Appendix B, including work management position definitions, processing functions, types of tasks and special documents. The positions are general in nature as they apply to the work management process and not tied to human resource position descriptions. Organizations are required to designate who has the responsibility to perform three key work management functions. This designation may be via organization charts, individual job descriptions, or other documentation methods. The processing functions are "validation", "work release", and "work acceptance" and the corresponding positions are named "Validation Authority", "Release Authority", and "Acceptance Authority" for uniformity. See also Appendix I for the roles and responsibilities for these and other participants in the work management process.

3.1 Work Management Process – Level 1 Process Map

At the highest level, the work management process can be broken down into eight discrete functions. These eight functions directly implement ISMS Core Functions and EMS Core Elements into the PRC Work Management Process.



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Activity	Procedure Section	Description	ISMS Core Function EMS Core Element
Identify Work		The work management process starts with someone identifying a scope of work to be done. Task initiators are varied: individual employees may identify deficiencies, project plans may lay out a well defined and documented work scope, and periodic maintenance items are recalled on frequencies determined by the respective Design Authority.	ISMS - Define Scope of Work, Establish ESH&Q Policy EMS - Environmental Policy
Request Work	3.2.1	The scope of work is converted into a work request to start the process. Low hazard work is screened against criteria to determine adequacy of simple work document styles. Work that does not screen out will be fully planned.	ISMS - Define Scope of Work, Identify & Analyze the Hazards EMS - Environmental Policy, Planning
Validate Work	3.2.2	The work request is evaluated to be necessary, part of the project mission, and not duplicating a previous request by a Validation Authority. The request is entered into tracking systems with a priority and work type, and forwarded to the appropriate actionee.	ISMS - Define Scope of Work EMS - Planning
Plan Work	3.2.3	The request is converted into a work document (WD) with proper WD elements, as appropriate to the request. Workers are involved in scoping, hazard identification and analysis, and developing hazard controls. WD elements are generated to resolve the request and routed for review and approval. Environmental Aspects, Targets and Objectives are considered. High hazard work is reviewed by project management. Comments are incorporated, and the final product is reviewed again, as appropriate.	ISMS - Define Scope of Work, Identify & Analyze the Hazards, Develop & Implement Hazard Controls, Management Review EMS - Planning

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Activity	Procedure Section	Description	ISMS Core Function EMS Core Element
Schedule Work	3.2.4	The approved work document is placed on the project work schedule, as resources are available to support the resolution. The schedule may also be used to track routine work, walk downs and other activities that require workers to ensure effective utilization of resources for all phases of the work management process. Schedulers consider project goals and priorities to ensure that resources are applied to the most important work.	ISMS -Develop and Implement Hazard Controls, Perform Work Within Controls EMS - Planning, Implementation & Operation
Perform Work	3.2.5	Work is authorized for field work when the Release Authority understands the effects to the project or facility and ensures that all authorized work is compatible, and hazards are controlled. Training and qualification of the workers is verified, and a pre-job briefing is conducted. The resources assigned to the work package perform the instructions following defined controls in order to resolve the request.	ISMS -Perform Work Within Controls, Develop & Implement Hazard Controls EMS - Implementation & Operation
Close Out Work	3.2.6	The completed work package is reviewed and accepted by the work customer (Acceptance Authority). Feedback is provided through a post job review process. The completed work package is archived, history databases updated, a complete status entered into tracking systems. Feedback is retained for future reference during the work planning process or issued as a Lesson Learned.	ISMS -Provide Feedback & Continuous Improvement, Management Review EMS - Checking & Corrective Action
Work Complete		The end result of the work management process is that assets have been maintained, modified, installed, deactivated, dismantled or a service performed.	ISMS/EMS - Management Review

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3.1.1 Signature requirements

Signatures and initials that signify preparation, approval, and/or validation of records require the typed or printed name(s) of the individual(s) signing or initials or numbered acceptance stamps (use of signature stamps is not permitted), provided that a log that clearly relates the initials or stamps to the individuals and organizations using them is maintained and a copy is retired with the records to which it applies. See PRC-PRO-IRM-10588 for further details.

Approval, pre-work review, release, work acceptance, field work complete, post-review, suspension, suspension concurrence, and work change notice (WCN) incorporation signatures must do one of the following:

- have the name printed beside the signature, or
- be generated electronically in the work control software, or
- be connected to the individual's signature or initials via a log that accompanies the work package for record retention.

The post-review signature validates/authenticates that the work package is accurate and complete.

Process signatures include those for approval and incorporation of change notices, whether editorial, direct, or formal.

Electronic signatures are sufficient and a hand-written signature is not required to accompany them, but they must be dated.

Tracking signatures within work instructions are not required to be printed and dated except where specifically required, such as in the case of Hold Points.

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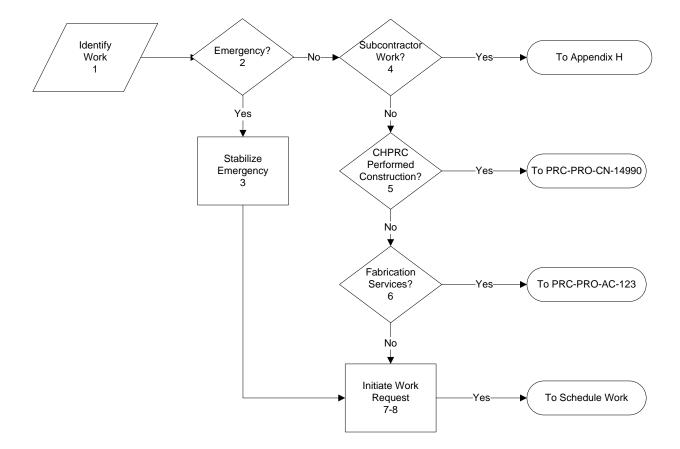
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3.2 Work Management – Level 2 Process Maps

3.2.1 Request Work

Work tasks enter the work management process through the Request Work function. The urgency of the work task and definition of characteristics of the needed work are the prime concerns in this function. This function is primarily established to support field generated work tasks.



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Actionee	S	tep Action
Requestor	1.	Characterize the condition requiring work, noting locations, visual characteristics, and instrument indications. Include any information that relates to the urgency of the condition because of safety, regulatory or scheduling issues. Any employee may identify work.
	2.	If an identified condition is unsafe, unstable, and/or may be an emergency, notify the building administrator/facility manager to stabilize in accordance with Alarm Response Procedures, Building Emergency Plans, and/or Facility Response Plans developed per PRC-RD-EM-7647, <i>Emergency Preparedness Program Requirements</i> . See Appendix B for a definition of emergency.
Building/ Facility Owner	3.	Assign resources to stabilize the emergency. Go to step 7.

NOTE: For emergency actions not requiring follow-on corrective maintenance, entry into logbooks is sufficient and no work request is required.

Requestor/ WCC Staff

- 4. If work will be performed by contracted resources (subcontractors) utilizing a Statement of Work (SOW), refer to Appendix H for Work Management considerations. Otherwise, go to step 5.
- If the work will be CHPRC-performed construction, all CHPRC procedures apply. This category of work, sometimes called "self-performed construction," is performed by the EPC project. Refer to PRC-PRO-CN-14990 and Appendix H. Otherwise, go to step 6.
 - a. A Construction Work Authorization Envelope (CWAE) per PRC-PRO-CN-8006 or memorandum of Understanding (MOU) should be utilized to clarify the responsibilities for execution of hazard analysis, work instruction generation and work release in accordance with PRC-PRO-WKM-079 and PRC-PRO-WKM-12115.
 - b. For work within facility boundaries a work package will be generated to ensure that interfaces with the facility are well-understood, documented, and controlled. System tie-in, LOTO, special considerations for DSA, emergency preparedness and hazard controls of concern to the facility will be addressed, as a minimum.
 - c. Work outside facility boundaries will incorporate the same control process as described above but with the release authority function being provided by the EPC controlling organization in charge of project oversight.
- 6. To obtain Fabrication Services, refer to PRC-PRO-AC-123, *Requesting Materials and Services*. Otherwise, go to step 7.

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Actionee Step Action

- 7. Formally request the work. Select the correct document style by reviewing <u>Section 3.3.1</u>.
 - a. Generate a *Minor Work Ticket* (Site Form A-6004-645,) if the work meets the criteria in <u>Appendix E</u>. Fill in the blanks on the MWT per the form Instructions, and go to <u>Section 3.2.4</u>.
 - b. Generate the work request in the Job Control System (JCS).
- 8. Ensure that the work request contains adequate information about the system or equipment, and the importance and desired timing of the work. Examples include:
 - Equipment or system information, such as name, location, what it should be doing that it is not, or what it is not doing that it should be.
 - Relevant information about concurrent activities.
 - Scheduling and priority considerations.
 - If request is related to milestones, fee goal, Tri-Party Agreement, etc.
 - If work needs to be performed during or coordinated with a scheduled outage (electrical, system, building, etc.).
 - o If the problem does not meet the criteria for an emergency, but is urgent for some operational reason.
 - If the item is related to Deferred Maintenance per DOE Order 430.1B (CAS, FIMS, etc.).

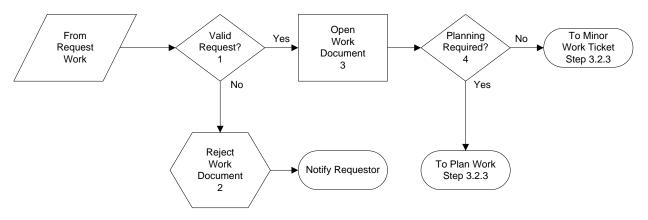
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3.2.2 Validate Work

The Validate Work function evaluates requests to determine if they are necessary and then directs the requests into the proper type of WD for planning and performance. Work that enters the Work Management process from a project plan gets validated when it is entered into the JCS to obtain a tracking number to enable work planning to start. Minor Work Tickets do not require validation.



Actionee	Step	Action
Validation Authority	1. Review	the request as follows:
Authority	a. Che	ck existing JCS listings for duplicate requests.
	b. If the	e request is determined to be invalid, go to <u>Step 2</u> .

If the request is determined to be valid, go to <u>Step 3</u>.

NOTE: The Validation Authority for Preventive Maintenance (PM) WDs is the PM Coordinator for the organization.

2. Reject the request and notify the Requestor of the reason for the rejection.

NOTE: Each work request is evaluated for interactions with the environment which leads to the identification of environmental aspects and impacts. Depending upon the work scope, during the work planning process, each work initiator or planner must complete either an Automated Job Hazard Analysis (AJHA) or an Environmental Activity Screening Form (EASF), site form A-6004-962, or comply with step 3.2.3.16. PRC-PRO-EP-15333, Environmental Protection Processes and PRC-PRO-EP- 15335, Environmental Permitting and Document Preparation procedures describe the use of the AJHA and EASF.

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Actionee	Ste	ep Action
Validation Authority	3.	Open a WD to start the work control process as follows:
Additionly		 Select the style of WD most appropriate for the work activity (See Section 3.3.1).
		 Assign a Priority to the No Additional Planning Required (NPR) or Planned WD per <u>Appendix C</u>.
		 Assign scheduling or tracking codes as appropriate based on information provided by the work requestor and your knowledge of the work, system, facility, etc.
		Forward the WD to the department that has responsibility to champion it through the process.
	(A Minor Work Ticket (MWT) does not require validation, go to Section 3.2.4
	(For NPR or Planned Work, go to Section 3.2.3.

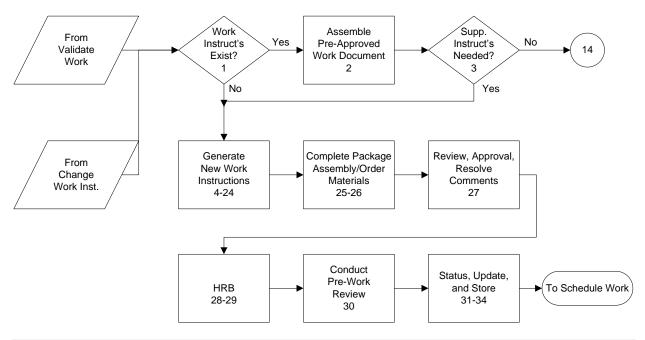
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3.2.3 Plan work

Work requests enter the Plan Work function after being validated and having a priority assigned, or after being suspended in the Perform Work Section (Section 3.2.5). This section defines those mandatory steps that are required during the planning of work instructions. The steps outlined in this section may be performed out of sequence as long as all applicable elements have been satisfied. More information about specific topics and guidance on content and format is located in the PRC-GD-WKM-12116. Early involvement of subject matter experts (SMEs) from initiation of planning through WD approval will promote WDs that can be performed in a safe and efficient manner. All planned work instructions must be either generated or approved by a person who has completed the qualification course #170723.



Actionee
Planner/PM
Coordinator

Step

Action

- Determine if a CHPRC/project/facility pre-approved WD exists that will perform the work task.
 - a. If pre-approved document exists go to step 2.
 - b. If pre-approved document does not exist go to step 4.
- 2. Package the pre-approved document in the work package. These bulleted considerations apply for all cases (a c) noted below:
 - The pre-approved work document must state the hazards evaluated to allow for comparison with current work activity hazards. If not present then the hazard analysis and radiological screening must be updated or performed.
 - If a standing hazards analysis exists, review the AJHA with appropriate SMEs per PRC-PRO-WKM-079 to ensure the AJHA still adequately addresses the hazards of the work place and update as necessary.

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Actionee	St	
		Determine if the work is radiological per the definition in the <i>CH2M HILL Plateau Remediation Company Radiological Control Manual</i> , CHPRC-00073, Glossary, and document this determination in JCS.
		If the work is radiological work, ensure that the Radiological Work Planners re-perform Radiological Hazard Screening per PRC-PRO-RP-40108, <i>Radiological Hazard Screening</i> , or if the AJHA was updated.
		If the work activity is requires work planning (not NPR or MWT), review HRB screening criteria and document in JCS per PRC-PRO-WKM-40004. If any criteria are triggered, proceed as directed in the HRB procedure.
		a. Work instructions that utilize only documents that are previously approved (e.g., Periodic Maintenance Procedures, Operations Procedures) do not require an additional review and approval if hazards have remained the same as described in the approved document, or since the last performance of the work activity if a hazards analysis was performed at that time. For skill-based work, ensure a WHA exists or has been performed.
		b. If pre-approved instructions were prepared externally, verify that approvals, hazards analysis, and facility configuration demonstrate program compliance. Supplemental instructions may be required in order to achieve compliance with CHPRC programs.
		c. If only a portion of the pre-approved instructions will be performed, ensure proper integration and analysis of hazards and implementation of revised controls, if necessary.
	3.	Determine if supplemental work instructions are required.
		a. If supplemental work instructions are required, go to <u>Step 4</u> .
		b. If supplemental work instructions are not required, go to <u>Step 15</u> .
Planner	4.	Gather baseline information in preparation for work instruction development.

NOTE: DOE 0 210.2 requires DOE and contractor lessons learned be incorporated into work planning and work processes.

- Review DOE and contractor lessons learned databases via HILLS/OPEX and incorporate into the work instructions, See PRC-PRO-MS-067, Lessons Learned/Operating Experience *Program*, for more information.
- Search the Condition Reporting and Resolution System (CRRS) website for issues with similar or related work activities.
- Review past work documents (JCS)

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Actionee	Step	Action
Planner	0	Review the Activity Level Feedback Database (AJHA web page).
	0	If the proposed work falls into D&D activities, consult Appendix K for guidance in applying the graded approach to the requirements discussed in this procedure. Determine if the work is radiological work per CHPRC-00073, Glossary, and capture this determination in JCS.
	0	If the work is radiological work, then a Radiological Hazard Screening must be conducted per PRC-PRO-RP-40108. Consult with project Radiological Control for further guidance during the work planning (see also steps <u>6e</u> , <u>16</u> and <u>22</u>).
Planner	5. P	erform a field walk down of the work task to be performed.
	0	If it is not safe to conduct a walkdown due to safety, environmental or ALARA concerns, then video cameras, pictures, etc., may be used in lieu of an actual field walk down.
	0	All planned work instructions must be either generated by or approved by a person who has completed work planning qualification course #170723.
	0	Include the Field Work Supervisor (FWS), SMEs, and workers as appropriate in the walk down.
	0	Consider existing work area hazards and hazards that will be created during the performance of the work.
	0	Use a dynamic walkdown approach: visualize the activities that will take place, observe issues that could affect Radiological Hazard screening, consider how the work activities can increase hazards to the worker or environment, and take note of energy control boundaries that must be implemented for the work. Consider the placement of equipment, supplies, step-off pads, etc.
	0	Walk downs are called out several times during the work planning, hazard analysis, and pre-job processes. For simple jobs, these job site walk downs may often be combined, but for complex or high-hazard jobs, each walk down is intended to provide a different perspective or to focus on a particular aspect of the work planning process. A graded approach on performance of walkdowns is allowed, with a minimum of one walkdown for planning and hazard analysis and another at the pre-job briefing if the work triggers any of the criteria stated in PRC-PRO-WKM-14047 requiring a walkdown.
	0	Evaluate and discuss the precise scope of the work, including the methods of performing the work. Ensure that the planning team knows exactly what is to be included in the work instructions including consideration of scope that is not to be included; the remainder of the planning activities hinge on clear and accurate understanding of the job scope.

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Actionee	Cto	p Action
	Ste	
Planner	C	Develop the work activity approach, including identification of special tools for work task to be performed.
	C	Consider the entire scope, milestone dates, resources required to accomplish the work and other relevant factors, including documentation required for completion, and appropriately divide the work into discrete work packages, or consolidate, as appropriate.
	C	Similar work with different milestones is more easily documented in separate work packages that can be completely closed out prior to each milestone date.
	C	If similar work must be performed on multiple pieces of equipment, consider how to structure the work package(s) to provide clear instructions and tracking to the field work team.
		Prepare draft work instructions to conduct the task based on walkdown results, considering work area conditions now and as expected at the time the field work will occur.

NOTE: See PRC-GD-WKM-12116, Work Planning Guide, for guidance on how to perform work planning, as well as pointing to source information for specific topics planners need to consider.

- a. If the work instructions from a previously used WD are to be cloned, update the instructions based on current hazards and facility conditions.
 - The previous work instructions must state the hazards evaluated to allow for comparison with current work activity hazards. If the previously used WD does not contain this information, the cloned instructions must be augmented to be brought into compliance with current hazard analysis procedures.
- b. If previous instructions do not exist, prepare draft work instructions. Guidelines for preparing work instructions for troubleshooting activities are detailed in PRC-GD-WKM-12116, *Work Planning Guide*.
- c. For all beyond skill-based work documents, review HRB criteria and document in JCS per PRC-PRO-WKM-40004. If any criteria are triggered, proceed as directed in the HRB procedure in parallel with this procedure.

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Actionee	Si	tep Action
Planner		d. Activities affecting quality and services shall be prescribed by and performed in accordance with documented instructions or procedures that include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished. The activity shall be described to a level of detail commensurate with the complexity of the activity and the need to assure consistent and acceptable results. The need for, and level of detail in, written procedures or instructions shall be determined based upon complexity of the task, the significance of the item or activity, work environment, and worker proficiency and capability (education, training, experience). (NQA-1 – 2008)
		e. If the work activity is medium or high hazard radiological work, the activity must be planned using a multi-disciplinary work team per CHPRC-00073, Article 312.2. Radiological work planners determine the radiological hazard in accordance with PRC-PRO-RP-40108, and perform radiological planning per PRC-PRO-RP-40109.
Design Authority/ Technical Authority (DA/TA)	7.	When work involves safety class, safety significant or hoisting and rigging structures, systems, and components (SSCs), actions should be included in the work instructions for detecting, identifying, reporting, evaluating, and dispositioning suspect or counterfeit items (S/CI). These actions shall be selected by the Design Authority, with concurrence by the responsible QA Engineer. Consult PRC-PRO-QA-301, Control of Suspect/Counterfeit and Defective Items, for full details. Instruct the crafts to be on the lookout for S/CI during disassembly/reassembly of existing equipment and replace any suspect parts that are encountered with genuine ones.
DA or Scientist	8.	Determine whether NDA measurements will be necessary for this work activity per PRC-RD-EN-10484, <i>Nondestructive Assay Management (NDA) Program,</i> and facility specific NDA procedures. In particular, determine whether safety controls, security requirements, or waste designation or packaging is based on existing NDA measurements.
		a. If not required, go to step 9.
		 If required, initiate actions to obtain Data Quality Objectives (DQO) paperwork and add appropriate controls, such as waste packaging constraints.

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Actionee Step Action

DA 9. Determine if work is a modification.

- a. If not a modification, continue to step 10.
- b. If a modification, determine if a Facility Modification Package (FMP) will be prepared or the Work Package CM Process will be used.
 - If an FMP will be prepared, develop and issue a FMP per PRC-PRO-EN-2001, Facility Modification Package Process.
 Provide the completed FMP to the planner. Work on systems shall be controlled under a formal change control/work control process to ensure that changes are not inadvertently introduced and that required system performance is not compromised. (See PRC-PRO-EN-1819, Engineering Requirements).
 - If the modification meets the criteria, complete the Work Package Engineering Cover Sheet (WPE) instead of an FMP and provide to the Planner. The WPE is site form A-6005-105, per PRC-PRO-EN-20050.
- c. The review and approval for environmental concerns is required for modifications by PRC-PRO-EP-15333 and will be documented as part of the AJHA, or you must complete an EASF per <u>step 17</u>. If the modification is skill-based and the only environmental issues fall under NEPA, see Appendix F.
- d. Initiate the *Modification Impact Review* (MIR) form (JCS version or site form A-6004-963). This is required for all modifications, whether an FMP is used or not. If there are no impacts, select that choice in JCS, and you may choose not to print the page, but there needs to be evidence that MIR impacts were considered.

NOTE: During preparation of the FMP, many documents (e.g. procedures, data bases, etc.) may be identified for change. Only those documents that are identified for change on the MIR will be tracked by the Work Management process.

- e. Any procedure or training input must be acknowledged as having been received by the respective organization before the WD may be released by the Release Authority.
- f. Draft work instructions may be prepared prior to finalizing the FMP, however the work instructions should not be approved until the FMP has been approved and the correlation or agreement between the two documents has been verified. If the work instructions and FMP are being routed for approval in parallel, it should be understood that any changes to the FMP must be reflected in the work instructions.

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Actionee	Step Action
DA/TA with	Step Action 10. If the work activity will involve placing controls for an operating system
Planner	out of its normal operating configuration for an extended period due to a safety concern or any other unanticipated event (and not due to scheduled and short term changes to the configuration, i.e. LOTO), and if there is not an existing operating procedure that addresses that configuration, then the following actions apply to this work document:
	 a. Complete a Modification Impact Review, in particular, perform a review of operating procedures that could be affected by the change in configuration, including off-normal or emergency response procedures (DA/TA)
	 Review control diagrams to determine interlocks, automatic features or other circuitry that might not be readily apparent, or that might be activated from a secondary event (e.g. loss of power, loss of control power, control switch line-up, etc.) (DA/TA)
	c. Incorporate into the work instructions any applicable actions that should be taken to inform Operations or ensure a safe condition. This could include warning statements before an action step, hanging an information tag on a controller, providing a summary of the potential automatic actions in certain situations for the SOM, etc. (Planner)
con	C-RD-PM-14988 provides instructions on how to obtain design information for astruction work. See PRC-PRO-EN-20050, CHPRC Engineering Configuration nagement, for instructions on using a graded approach for modifications.
DA/TA/ Planner	11. Determine if the work meets PRC-PRO-IR-070, <i>Plant Forces Work Review</i> , criteria.
	a. Notify Area Work Review Agent if the work must be screened.
Area Work Review Agen	12. Conduct a plant forces work review (PFWR) if the work meets PRC-PRO-IR-070, Plant Forces Work Review (Davis-Bacon Act Compliance) criteria.
	a. Provide the results of the review to the Planner.
Planner	13. Record PFWR determination results in JCS.
	 a. If work is Davis-Bacon covered work, notify construction manager and go to <u>step 14</u>.
	b. If not, go to step 15.

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Actionee	Step	Action
Construction	14. Refer	to Appendix H if work will be performed by contracted resources.
Manager	Other	wise, go to step 15.

NOTE:

Procedures or work instructions should be provided for all non-routine work activities. While activities may appear to be similar, each has a different set of characteristics and hazards which need to be evaluated and have effective controls applied to the work.

Planner / AJHA Coord / PM Coord 15. Conduct a hazards analysis per PRC-PRO-WKM-079. See also PRC-PRO-WKM-17132, *AJHA Process Guide*.

NOTE:

When using pre-approved instructions, some of the actions listed in steps:15 through 31 of this section might already have been completed depending on the administrative process that governs those procedures. In any case, the work activity itself and the location where the work will occur must be considered in these steps.

- a. In all cases, the work activity itself, the equipment/tools to be used, and the location where the work will occur must be considered during hazards analysis. When pre-approved instructions are supplemented with new instructions, the integrated work instructions must undergo hazard analysis, including Radiological Hazard screening.
- b. If only a portion of the pre-approved procedure will be performed, ensure integration and analysis of hazards and implementation of revised controls. That is, ensure that the hazards and controls identified for the task reflect the work that will actually be done.
- c. Evaluate the need for Hanford Fire Marshal permits per HNF-RD-8589 (endorsed), *Hanford Fire Marshal Permits*.
- d. Include FWS, crafts, operators, and radiological control technicians involved in the performance of the task as appropriate.
- e. Include SMEs (i.e., Radiological Control, Occupational Safety, Industrial Hygiene, Criticality Safety, Environmental Protection, Quality Assurance, Fire Protection Engineer etc.) as required.
- f. Make note of suggested energy control boundaries (LOTO) that the team feels should be considered for the work activity hazards. See PRC-GD-WKM-12116 for additional guidance for dealing with complex hazard boundary determinations.

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Actionee Step Action If the work activity has been determined to be skill-based per PRC-PRO-WKM-079, Appendix B, document the skill-based determination using fields for that purpose in JCS, or within the work instructions of the WD. All skill-based work that takes place in locations with known or suspected presence of beryllium must comply with Appendix J of this procedure. Generate work instructions if the work activity is not listed in Appendix E, Table C, or if sequencing steps are needed to correctly perform the work. Radiological 16. If the work was determined to be radiological at step 4, complete the Control Radiological Hazard Screening form (A-6004-654), and initiate radiological work planning. Perform a Radiological Hazard Screening and determine Radiological Hazard level. Radiological work should be planned, using a graded approach, based on the radiological hazard and complexity of the work activity and work location. (PRC-PRO-RP-40108). Document final Radiological Hazard determination using Site Form A-6004-654, or the AJHA version of that form. Prepare the ALARA Management Worksheet (AMW) (A-6004-634) for medium and high Radiological Hazard work activities. (PRC-PRO-RP-40109). For medium and high hazard radiological work, work together with the Work Planner to incorporate radiological hazard controls that have been identified on the AMW. Only those AMW controls that are marked with a "check box" entry are intended to be incorporated into the work instructions. Environmental 17. In the area of work management a review for applicable environmental Compliance requirements shall be conducted for activities involving: Officer or **NEPA Trained** Constructing or modifying facilities, equipment, or processes; 0 Individual Maintaining and repairing facilities, equipment, or processes, including preventive maintenance and surveillance testing (PMs); or Discontinuing use of, deactivating, decontaminating, dismantling, or closing facilities, equipment, or processes. This review shall be documented by one of these methods: a. Using the Automated Job Hazards Analysis system

(Site Form A-6004-962)

b. Completing the Environmental-Activity Screening form

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- c. Incorporating reference to sitewide categorical exclusions (SWCXs) and other DOE-approved National Environmental Policy Act (NEPA) documentation (as appropriate) into an applicable high-level work control procedure. Documentation of NEPA review via this option is demonstrated by:
 - An approval of the work document by one of the persons listed on the ECO's memo (See Appendix F), or
 - Notation of the applicable environmental document listed in <u>Appendix F</u> accompanied by the name of one of the persons listed on the ECO's memo who made the assignment.
 - NEPA SWCXs may only be applied by persons meeting the training requirements in PRC-RD-EP-15332, and as authorized in writing by the ECO with authority for the Project or Facility where the work activity will occur.
- d. The environmental review for skill-based modification work may be documented in the JCS field designed for that purpose without using an EASF if the SWCX is specified and the person who made the determination signs in the field provided.
- e. Environmental Compliance Officers (ECOs) are required to review and sign-off on each AJHA and EASF. During this review the ECO evaluates the work activity against the project specific Environmental Aspects and Impacts Worksheet and identify appropriate updates or revisions.
- 18. Before starting any demolition or renovation activities, the Cognizant ECO shall determine if the activities require submittal of a Notification of Intent (NOI) to the Benton Clean Air Agency (BCAA).

Planner

- 19. For planned work instructions use the standard outline format provided below. Those sections that are appropriate to the particular work document should be included; others may be N/Ad (preferred) or omitted with the section numbers changed to reflect their deletion. Asterisked items represent the minimum required sections for planned work.
 - 1.0 Scope*
 - 2.0 References (may be captured in JCS instead of work instructions)
 - 3.0 Materials, Special Tools and Equipment
 - 4.0 Precautions and Limitations
 - 5.0 Prerequisites*
 - 6.0 Work Steps*
 - 7.0 Restoration & Testing* (or, "as left" summary for D&D work)
 - 8.0 Startup Activities and Turnover (only used for CG&A, new construction, etc.)

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NOTES: • See PRC-GD-WKM-12116 for more information on each section. For asterisked sections also refer to Appendix B, Glossary, in this procedure.

- An acceptable exception to this format is when a draft procedure is being used as the work instructions for the purposes of validating that procedure. In that case, the appropriate procedure format would be used per PRC-PRO-MS-589.
 - State the precise scope of the work, including the methods of performing the work. Ensure that the work team knows exactly what is included in the work activity and scope that is not to be included. The scope description must be detailed enough o support the development of effective and accurate hazard controls for the proposed work activity.
 - Prerequisites and initial conditions should be detailed. Prerequisites describe initial conditions that the Release Authority must verify prior to authorizing field work to proceed. The RA must verify that actions related to plant configuration and other Operations responsibilities are satisfied prior to releasing the work, but all activities that must take place prior to work beginning should be in this section. Clearly group the actions in this section by those that are the responsibility of the RA and those that are the responsibility of the FWS and Work Team. The prerequisites include items such as facility configuration, equipment line-up, conditions related to facility safety basis, staging of equipment, scaffolding, etc.
 - Work steps provide the sequence and technical information for the work team to accomplish the work that was described in the scope statement. The FWS is responsible to direct the work team in a manner that complies with the approved instructions. All work steps will be considered Continuous Use unless otherwise specified within the approved instructions. When exercising this exception, a note shall be used to specify boundaries of flexibility within the work steps so that hazards controls cannot be inadvertently overlooked by the workers. Clarify which steps may be worked out of order or repeated if the note does not apply to the entire section, task or work instruction.
 - Restoration and Testing steps are intended to provide instructions for Operations to restore the facility to a status that complies with operational and design criteria, or as appropriate to the mission where the work was performed. In an operating facility, this section would typically direct the operators to a procedure to configure the equipment and verify it operates correctly. At a D&D facility, this section could summarize the "as left" conditions and state no retest is required. DOE Orders expect a retest whenever equipment has undergone corrective or preventive maintenance; the retest should be appropriate to the scope that was performed.

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Actionee	Step	Action
Planner / SMEs	ins no	corporate controls from the hazard analysis process into planned work structions. All work shall be performed according to work instructions, to per the AJHA or RWP or other documents. Refer to PRC-GD-WKM-116, Appendix M, for guidance in this area.
	Als	so consider:
	0	Environmental protection controls
	0	Waste minimization instructions
	0	NDA constraints and any waste packaging instructions that would have a bearing on how the material must be or can be counted.
	0	Radiological requirements and radiological hazard controls for medium and high hazard radiological work must be incorporated into the work document per CHPRC-00073, Article 311.3.
	0	If lockout/tagout (safe work boundary) is required for the work, include a statement in the work instructions that LOTO is required for this work. The specific safe work boundary points do not have to be included in the work instructions.
	0	If the safe work boundary (LOTO) is to be implemented incrementally or altered during performance of the work, consult with the Release Authority to determine the most appropriate means to ensure that the Release Authority is involved with integration of the work and the safe boundary changes. Verify the work instructions provide adequate structure to ensure that the isolation boundaries are clearly defined in each configuration change, or the RA controls authorization utilizing partial work release. See PRC-GD-WKM-12116 for additional guidance.
	0	Work involving electrical conductors must conform to electrical safety requirements stated in PRC-RD-SH-11827 and NFPA 70E 2009. Consider the following elements and include those that are applicable in the work instructions. Consult the Electrical Engineer and Occupational Safety for assistance on specific circumstances.
	0	Where work is being performed on de-energized equipment that is adjacent to "look alike" energized equipment, Safety Signs and Barricades shall be employed to alert employees as to what equipment is inside and or outside the scope of the work instructions.
		 Where barricades are not practical, an attendant and information placards shall be utilized. The 'look alike' alerting methods selected for a particular task shall be discussed during the pre-

through the safe-to-work check.

job briefing. (Reference NFPA 70E 130.7 (E)).

Circuits are considered energized until proven dead by LOTO up

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- Step Actionee Action
 - When energized conductors exist within the LAB, planned work steps will be required to specify the safe work boundary, the measures to be taken per NFPA 70E to implement the measures to create that boundary and how they integrate with LOTO, and signatures will be required for installation and removal of these measures, as appropriate. This bullet does not apply to Testing and Troubleshooting, Visual Inspection, or LOTO activities.
 - Documentation of arc flash and shock hazard analysis is required. To ensure compliance, use one of the following methods:
 - Direct the workers to complete the Arc Flash and Shock Hazard Analysis form A-6005-322,
 - Insert the JCS NPR code "arc flash," which will insert equivalent space for documentation into the "Resolution/Retest" field of the JCS work document.
 - Provide appropriate blanks in the work instructions in some form that correlates work steps to the electrical hazard documentation.
 - All required information written into a dated and signed entry in the Work Record of the work package
 - Refer to an approved Engineering document generated at the project for the work under consideration. The Engineering document would specify the hazard analysis for the equipment or panel. The accompanying Work Record entry should still specify the equipment and the applicable voltage.
 - Approved procedure or datasheet that provides blanks for the required information and electrical SME or qualified person concurrence
 - Any work aside from Testing and Troubleshooting, Visual Inspection, or installation of LOTO involving energized conductors ≥50 volts within the LAB requires performance of an AJHA, an Energized Electrical Work Permit (EEWP), and work steps of sufficient detail to protect the worker.
 - If the work will impact DSA requirements include appropriate language to adequately these requirements and the actions and documentation to support these activities. For those cases where a DSA requirement (Technical Safety Requirement, Limiting Condition for Operations, etc.) is incorporated into the work instruction, flag the text with an appropriate marking in the margin of DSA related work steps, or with a note, caution or warning statement ahead of the step. See also PRC-GD-WKM-12116 guidance on TSR, LCO and nuclear safety.

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Actionee	Step	Action
Actionec	О	Identify with a warning or caution statement those Critical Steps that were designated during the planning process. From DOE handbook 1028-2009:
		<u>Critical Step:</u> A procedure step, series of steps, or action that, if performed improperly, will cause irreversible harm to equipment, people, or the environment. A primary goal of the worker is to retain positive control at critical steps when error-free performance is essential for safety.
	0	Identify with a caution or info statement those work steps that require oversight personnel to be present, as identified by the SMEs or by the HRB.
Planner with Industrial		aluate the potential work site vehicle hazards and determine propriate controls to be included in the work instructions.
Safety Rep	a.	Evaluate potential vehicle hazards (i.e.; pedestrian traffic, bollards, "T" posts, debris, poles, material storage, vegetation, etc.).
	b.	Designate temporary/permanent vehicle and equipment parking location(s).
	C.	Develop appropriate hazard mitigation controls to be implemented,
	d.	Identify emergency vehicle access to work site(s).
	e.	Develop vehicle hazard communication tools appropriate for the job and the hazards, (e.g.; site maps, signs and postings, etc) and include them in the work package; refer to them in the work instructions as appropriate.
Radiological 22. For planned work that is radiological (see step 4), ensure actions are included:		r planned work that is radiological (see <u>step 4</u>), ensure the following tions are included:
	a.	Work with Planner to ensure appropriate radiological controls for medium and high hazard radiological work are identified and incorporated into the WI to mitigate or control radiological hazards; identify requirements for the monitoring of radiological conditions during work; identify minimum radiological coverage and action levels to support planned work; identify actions to reduce total dose or the potential for spread of radioactive contamination. [CHPRC-00073, Chapter 3].
	b.	In areas with the potential for changing radiological conditions, ensure the work instructions contain an action to verify radiological conditions prior to entry or commencement of work.

[PRC-PRO-WKM-40004].

c. Support the planner and FWS with preparation for the Hazard

Review Board Meeting for high Radiological Hazard work activities.

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	Work management			
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	Antin	200	Ston	Action
	Action	166	Step d.	Action Determine the need for and incorporate radiological control hold points. [CHPRC-00073, Article 315].
			e.	All radiological work instructions shall be integrated in the work document instructions; the RWP should not contain radiological work instructions; rather it should provide entry, dosimetry, PPE and radiological coverage requirements to support the radiological work instructions. Radiological hazard controls checked on the AMW shall be incorporated into the work instructions.
	Planner	2	for	corporate a retest into the work instructions, as provided by the DA/TA, those work tasks that are placing structures, systems or components SC) back into service.
	NOTE:	accepta	nce te	-286, Testing of Equipment and Systems, provides instructions for sting of new, repaired or modified SSC to ensure they meet esign, performance and quality requirements.
	DA/TA	2		ovide USQ GCX/screenings/evaluations to the planner as required by C-PRO-NS-062, <i>Unreviewed Safety Question Process</i> .
			0	The planned work activities must be evaluated against the potential impact to the safety authorization of the facility. A safety review is conducted to ensure that the work activities are authorized to be performed within the facility's safety envelope.
			0	Documents that provide instructions to workers at a facility to which PRC-PRO-NS-062 applies are required to receive USQ review before implementation in the field. Such documents provided by organizations outside the PRC, even though pre-approved by the respective company process, must be reviewed by PRC personnel in accordance with PRC-PRO-NS-062.
			a.	Provide USQ GCX/screenings/determinations to the planner as required by PRC-PRO-NS-062, <i>Unreviewed Safety Question Process</i> for Transportation & Packaging activities involving >A2 quantities of radioactive material.
	DA/TA/ Planner	2	inv	nsider requesting a peer review of the work instructions for work that olves interlock circuits or complex integrated systems, particularly if pitability of work spaces could be at risk during the work activity.
		2	<i>Do</i> ins	entify review disciplines per Appendix L, Review and Approval of Work cuments, and any project-specific requirements. If the work tructions are in the form of a draft procedure undergoing validation,

procedure prior to publication.

the list of reviewers shall include all who would normally review the

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Actionee	Step	Action
Planner/SME/ PM Coord /	27. Order materials not on hand that are necessary to perform the	
DA/TA	a.	Work with the DA/TA to determine material requirements for the WD and submit a Bill of Material (<u>eBOM</u>) to the Material Coordinator for processing. The DA/TA approves material orders through normal Procurement processes.
	b.	Consider Suspect/Counterfeit Items for SSCs that are SS, SC or Hoisting and Rigging.

NOTE: Additional information on processing an eBOM or other procurement/material issues may be obtained by visiting the PRC Procurement web site.

Planner

- 28. Complete work package assembly according to the document style. See PRC-GD-WKM-12116 for details.
- Distribute the WI for review and resolve comments.
 - a. If comment resolution results in changes to hazards or controls, ensure the Radiological Hazard Screening and AJHA have been reviewed and revised if appropriate.
 - b. Obtain approvals identified by the DA/TA.
 - If an identified Approval Authority is unable to electronically or hard copy sign the WD, approval may be obtained per telecom concurrence.
 - d. If the work instructions were written by someone who has not completed the work planning qualification per course #170723, a qualified planner must approve the work instructions.
- Obtain review and approval by the Hazard Review Board (HRB) for high-hazard radiological work in accordance with CHPRC-00073, Article 312.2.
 - If the scope or hazards change after the HRB has reviewed the work instructions, consult the chairman to determine whether the revised instructions must be reviewed by the HRB again.
- 31. Obtain *Hazard Review Board Meeting Record* (site form A-6004-513) from the HRB Chairperson or Coordinator if the HRB criteria of PRC-PRO-WKM-40004 triggered that review. Insert the form in the work package.

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Actionee Step Action 32. Conduct a pre-work review to determine if the work package is ready to Release be worked. The level and rigor of the pre-work review will vary Authority or depending on the attributes of the work and where the work is delegate performed. Attributes such as complexity of the task; impacts on the facility system configuration, and the need to coordinate with other facilities or work groups should be considered. An extensive review by a Release Authority may be needed at nuclear facilities; a simpler approach at non-nuclear facilities may be acceptable. The following are some examples of elements that should be present, depending on the work to be performed: All specified reviews and approvals have been obtained. Required information is present on JCS electronic forms. Work is clearly identified as skill-based or beyond skill-based. Prerequisites for work release have been identified and grouped by area of responsibility (Operations or Field Work Team). If facility conditions must be changed during the work, ensure applicable instruction has been inserted into the work steps to establish facility conditions prior to the applicable work activities. Supporting documents are approved, released, and included in the work package if the work is to be scheduled in the near term. For example: Reference procedures. Engineering documentation such as FMP, drawings, travelers, specifications, Unreviewed Safety Question (USQ) screenings and evaluations. Verify MIR inputs have been identified by the responsible party. Permits for radiological work, excavation, confined space entry, core drilling and welding, and hot work. Safety support documents such as Job Hazard Analysis, Fall Protection Plans, Lockout/Tagout (LOTO) authorizations and Rigging Plans. Radiological Hazard Screenings/ALARA reviews. The resolution contains all required elements applicable to the work, is readable and easy to follow in the field, and is structured so the Release Authority (RA) understands the impacts to the facility and adjacent work activities.

If the work package is to be partially released, (i.e., step, component, etc,) ensure that the authorized activity is clearly defined and that the hazard analysis is not impacted or new hazards are not introduced by allowing partial versus full release.

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Actionee Step Action

- If LOTO is required for the work, ensure that fact is stated early in the document.
- If the LOTO must be incrementally implemented or altered during performance of the work, ensure the work instructions provide adequate structure to ensure the isolation boundaries are clearly defined in each configuration change, or the RA controls authorization utilizing partial work release. (refer to step 20).
- If package was previously suspended, ensure the suspension reason has been resolved to allow work to continue and verify the hazard analysis and radiological hazard screening are not impacted or were re-performed as appropriate.
- Verify that HRB criteria were considered for all work that is beyond skill-based by verifying the HRB fields in JCS.
- If the document is for skill-based work, ensure the HRB field in JCS is marked N/A.
- If the HRB field in JCS is blank, perform the HRB criteria screening per PRC-PRO-WKM-40004 and update the fields in JCS, or return the package to the Planner for the screening.
- If the HRB field in JCS is marked NO and you agree, no further action is required; continue the pre-work review.
- If the HRB field in JCS is marked YES, and the HRB meeting has already occurred, verify it has been conducted and HRB approval has been documented by one of these methods:
 - o a statement in the Work Record
 - the completed HRB Meeting Record form is located in the work package
- If the HRB field in JCS is marked YES, but the HRB meeting has not yet occurred, do not status the work package as SCH-RTW when the pre-work review is completed.
- For hazard category 2 or 3 nuclear facilities, ensure:
- USQ screening, evaluation or CX determination is present and approved.
- Safety Basis (Authorization Basis) considerations have been clearly determined, such as LCO entry and exit steps, time limits and compensatory actions during the work.
- Adequate restoration and retest instructions are included, including post maintenance tests and Operational functional testing to demonstrate Operability.
- Verify applicable acceptance criteria are included.

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Actionee Action Step 33. If work to be performed will not impact facility or equipment operation, a no release required (NRR) option may be used. The work document can be designated as No Release Required (NRR) if it meets all these criteria: The work will not impact facility or equipment operation outside of normal operating procedures. No retest of the work by Operations is required (no Ops Acceptance necessary). The Release Authority concurs that release is not required, or in the case of PM/S Activities, the work has previously been identified as NRR. The RA is or will be made aware that the work is in progress. 34. Print, sign and date for this review. (See Section 3.1.1) Release 35. Update the work status in JCS for the package as appropriate. Authority, SCH-RTW - if the WD is ready to work and the work window is Delegate, or entirely within the control of the facility or project. Support Staff If the work instructions are acceptable, but something else would prevent the work from proceeding, the following status codes are available: SCH-CDN, specific and unusual plant conditions are required for this work, such as a major outage, plant mode, etc. SCH-MAT, materials have not been received. SCH-RES, specific and unusual worker resources are required, typically borrowed or contracted. SCH-RWP, job-specific RWP has not been approved.

36. Locate the work document in a controlled location to await scheduling.

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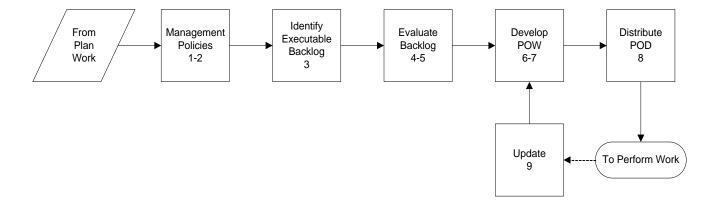
3.2.4 Schedule Work

Scheduling and coordination of maintenance activities avoids unnecessary removal of equipment and systems from service and uses manpower effectively.

Higher order drivers, such as programmatic milestones, require projects/facilities to develop higher tiered schedules that provide a long view of the activities necessary to satisfy those drivers. The Scheduling discussed here addresses the daily activities of a given project or facility that are necessary to achieve the milestones. This level of scheduling is a means of ensuring that the most important work is accomplished with the most cost effective use of personnel and equipment resources. It requires flexibility and quick responses to deal with the inevitable course alterations that occur each day.

Ideally, all activities that involve critical resources should be scheduled. This could include all types of work documents (MWT, NPR and Planned instructions), scoping walk downs and AJHA sessions, critical shopwork directly related to field work, construction or subcontractor work that utilizes facility/project resources, and some operational activities, especially those that require support from non-operations workers. Activities that affect the availability of the worker pool may also be scheduled, such as planned vacation and training.

The Work Management Process supports these schedules by utilizing up to four types of documents to schedule, track and release work: a weekly schedule (Plan of the Week, [POW]) and a daily schedule (Plan of the Day, [POD]) that factor in availability of resources and reflect all field activities and resource allocation at the project, a Daily Release Sheet (DRS) that summarizes and tracks the work authorized by the Release Authority, and scheduling tools used to track resource allocations and closely align with the POW/POD. These tools are all available in JCS, but projects may choose different software to perform these functions. Projects may also choose to fulfill multiple functions with one document, for instance, a POD may also be used as the DRS if it meets the requirements for both documents.



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Actionee	Sect 3.2.4.	Action
Facility/Project Management	 Set expectations for daily and w to field work at the project. 	eekly meetings (POD and POW) related

- a. Determine who will conduct the meeting (may be assigned by position in the organization) and the limits of authority for that person.
- b. Set the expectations for core attendance at the POW/POD meetings. Attendees should include representatives from Operations, Maintenance, projects, work control and management such that priorities for the week's and day's work can be meaningfully discussed and reset as appropriate.
- c. Set expectations for additional attendees as appropriate, such as Fieldwork Supervisors, and representatives from project Safety, Industrial Hygiene, Radiological Protection, and Construction or Subcontractors.
- Determine when inputs for the POW/POD should be submitted to Scheduling, and set expectations for this to be done consistently and effectively.
- Determine how the POW and POD documents will be generated and distributed. Consider which software to be used, distribution list for the POW/POD, means of distribution (electronic or paper), and frequency of distribution (daily, weekly, etc.)
 - a. The POD documents shall contain the following information about the work that is tracked:
 - Job number (or appropriate identification for non-JCS documents, such as procedures, routine activities, etc.)
 - Job title, or short job description
 - FWS or Point of Contact for the job (routine work may be assigned to an organization or position rather than a specific person)
 - Craft resources necessary for the job each day (by discipline job description, respective numbers of each type are optional).
 Some teams of workers may be grouped, especially when using brokered resources provided as a group, such as a crane and rigging crew, Vent & Balance, etc.
 - Additional information may be included as desired by the project, such as document work status.

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Actionee		ect Action 2.4.
Facility/Project	4.	Establish how the POW/POD meetings and documents and the DRS will
Management		be used to track work and resources at the facility or project.

- a. The POD document shall include all field work (see <u>Section 1.2</u> or <u>Appendix B, "Glossary"</u>) under the responsibility of the project, excluding activities performed by resident organizations (i.e., Operations, Radiological Protection) per approved procedures performed outside of work packages. Routines may be grouped together by the work group that performs them or by another logical method.
- b. Determine whether to include worker time commitments for training, PTB, planning and AJHA meetings, etc. on the POD, or whether these items will be reflected only in the scheduling tools utilized by those who perform resource allocation.
- c. Determine when work activities shall be placed on or removed from the POW/POD (when hard scheduled, when field work complete, when retest is complete, when suspended, etc.).
- d. Determine what mechanism will constitute the Daily Release Sheet (DRS). The DRS shall reflect all work activities that are required to be authorized for work by the Release Authority (RA). The project may use the POD as the tracking mechanism on which to authorize work, or the DRS may be a separate document. Good practice dictates that all field work is known by the Release Authority, even if it is not required to be authorized.
- e. Project Management shall determine whether the RA should maintain a copy of the POD and the DRS through the shift, or if the DRS should list all field work. If the DRS is a separate document, it shall contain the following information about the work that is tracked:
 - Job number (or appropriate identification for non-JCS documents, such as procedures, routine activities, etc.)
 - Job title, or short job description
 - FWS or Point of Contact for the job (routine work may be assigned to an organization or position rather than a specific person)
 - Additional information may be included as desired by the project, such as document work status.

Scheduler

5. Review the backlog to identify work packages that are approved and have gone through Pre-Work Review.

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Actionee	Se 3.2	// CTION
Scheduler	6.	Evaluate the following factors to determine the initial work list for the Plan of the Week (POW):
		o Work priority.
		 Material availability.
		o PM Due Dates.
		 System/component availability.
		 Project schedules and milestones.
		 Measuring & Testing Equipment (M&TE) availability.
		 Support equipment availability.
		 Special worker qualifications or training requirements.
		 Workers available to meet manpower requests.
	7.	Discuss the initial work list with representatives from key work groups (operations, maintenance, radiological control, work control, etc.) to determine conflicts, strategies for sequencing, etc. This discussion is often referred to as the Pre-Plan-of-the-Week, or Pre-Plan.
		For planned work documents that are desired to begin field work during the next week but are not in work status SCH-RTW, determine what is needed to allow the work to proceed, when this will be resolved and who is responsible for the action.
	8.	Develop the POW from the initial work list:
		Balance the work load to account for availability of human and material resources.

- c. Consider the assigned priorities of each work package when choosing which will be supported.
- d. Include job scoping and planning walk downs, AJHA sessions, and similar activities as determined in step 4.

b. Select work items that are compatible with overall facility needs and

NOTE: Contingency activities may be shown on the POW to allow high resource utilization when hard-scheduled activities are suspended or completed ahead of schedule.

system availability.

- 9. Participate in the weekly resource brokering activities to borrow extra resources as needed.
- Conduct a POW meeting with the appropriate attendees to confirm the work that has been scheduled and for which resources have been allocated.

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Actionee	Sect Action 3.2.4.
Scheduler	11. Distribute the POD to individuals and in the form determined by management, typically daily unless project management has determined a different frequency.
	12. Update the POW/POD on a frequency determined by facility/project management, typically daily, to accommodate changes in resource availability, priorities, facility status, and to status the ongoing work in order to generate the next POW/POD.
	JCS Work Packages with Temporary Changes (see <u>Appendix B</u>) shall not be closed or suspended until the system is returned to its normal configuration, and must remain on the DRS and/or POD until closed, or with project management permission, may be tracked on the Operations Manager turnover sheet.
Scheduler/ Work Control Staff	13. Prepare a Daily Release Sheet as determined in step 4 . Daily, deliver to the RA the DRS, any work documents to be released, and work that shall be considered for No Release Required, NRR.

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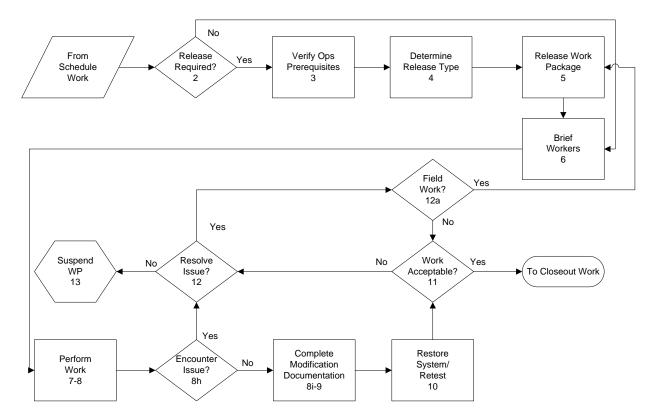
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3.2.5 Perform Work

The Perform Work function executes authorized work in the field. This section applies to work documents developed using this procedure, although some elements can be applied to all field work, such as conducting a pre-job briefing, monitoring the performance of the work, and dealing with changing conditions during the work.

The goal of work planning is to produce work instructions that can be performed safely and efficiently, and yet changes to the instructions may be required. The Perform Work function includes a process for such changes.

Work packages are released using a graded approach; some require no formal release while others are released for defined time periods.



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Actionee	Sect 3.2.5.	Action
Work Control Support Staff	1. Ite pe th or ch ef Ro pr	ems marked with an asterisk (*) in the next two steps may be enformed by support staff (work control, planners, schedulers, etc.) so at the actual verification by the RA becomes a formality. If aganizational structure at the facility or project allows, having these necks done within 24 hours of the work release function can be an afficient means of relieving some administrative burden for the FWS and elease Authority. For instance, if a procedure has changed since the re-work review was performed the support staff can place a copy of the ew revision in the work package before the RA reviews it for work elease.
		etermine if the Work Package has been classified as not requiring a rmal release at step 3.2.3.33.
	a.	* Some routine work packages may be designated as NRR during the WD approval process, or for PM/S work packages, the PM/S coordinator may enter NRR if the PM/S Activities in the package have been previously determined to be NRR.
	b.	* The NRR provision must be documented in the WD by the Release Authority, unless for a PM/S WD as noted in step a above.
	C.	Shop work typically does not require a formal release. If, shop activities require application of a Lock Out/Tag Out (LOTO), consider whether the use of a Partial Release approach is appropriate to ensure adequate hazardous energy control.
	lf	no release is required, go to step 6.
Release Authority	re ra Cı	erify the following items to confirm that the work package is ready for elease. Consult SMEs if necessary, especially to confirm the status of ediological or industrial safety aspects of the work activity or work site. The urrent radiological conditions may be obtained from the cognizant roject/Facility Radiological Control First Line Manager.
	0	If the pre-work review is more than three months old, or if any known changes or modifications have occurred, review the work document against the pre-work review criteria to ensure project mission, facility conditions, changing hazards, etc. have not invalidated the approved instructions or hazard analysis.
	0	* All applicable supporting documents, permits and safety plans are in place, particularly any that were not available when the pre-work review was conducted.
	0	* Any pre-approved procedures within the work package are the latest revision.
	0	If the revision date was after the pre-work review date, evaluate whether the procedures changes affect facility configuration, hazard boundary, LOTO or other technical or administrative areas that would affect release of this work package.

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Actionee	Sect 3.2.5.	Action
Release	0	System lineup is configured and ready for work to commence.
Authority	0	Compatibility with other currently released work activities.
	0	If LOTO is required for the work, the controlling organization will verify the LOTO has been implemented per DOE-0336, or if the safe work boundary is to be implemented incrementally or altered during performance of the work, verify the work instructions provide adequate structure to ensure that the isolation boundaries are clearly defined in each configuration change, or the RA controls authorization utilizing partial work release.
	0	Limiting Conditions of Operations (LCO) impacts are understood.
	0	Work area radiological conditions are consistent with planned radiological conditions. (Confirm with facility Radiological Protection)
	0	Hazards identified in job hazard analysis have not changed and new hazards have not been introduced.
	0	All identified Operations prerequisites required to establish facility conditions have been met or applicable instructions (and signatures, if appropriate) have been inserted into the work steps to establish facility conditions prior to the applicable work activities.
	0	If prerequisites have been identified that must be performed by the work team and the Operations prerequisites have not or cannot be completed, issue a partial release for completion of the prerequisites that require field activity. Full release may not be authorized until the Operations prerequisites are completed.
	0	* Required notifications have been made.
	0	* MIR inputs have been received as identified on the form to support modification work.
	0	* FMPs have been released into HDCS by Document Control per PRC-PRO-EN-2001, if applicable.
	0	JCS Work Packages with Temporary Changes shall not be closed or suspended until the system is returned to its normal configuration, and must remain on the Daily Release Sheet and/or Plan of the Day until closed. If releasing such a package, ensure Scheduling understands the ramifications.
	0	* The work instructions were evaluated against HRB criteria; verify by checking the HRB field in JCS. If the HRB field is marked YES, verify the Work Record contains an entry stating HRB approval that the work may proceed, or locate the approved <i>HRB Meeting Record</i> (site form A-6004-513) in the work package. If HRB was required, the work package may not be released until HRB Chairperson's approval is obtained on the Meeting Record form or in the Work Record.

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	Sect	
Actionee	3.2.5. Action	
Release Authority	 If work release is required, determine if the work release will be a Fu Partial release and identify it in the work package. 	ıll or
	 Full Release - work the full work document. 	
	 Partial Release - work only a specific component or section of th work document. 	ıe
	 If the work package will be Partially Released, clearly identify the work package the release restrictions. 	/ in
	5. Release the work package for work in the field and ensure the follow	ving:
	 A daily release is used in facilities having the potential for chang hazards and high volumes of work. Longer release periods may used where hazards and field conditions are stable. 	_
	 Hazard Category 2 or 3 nuclear facilities may release work for 24-hour periods only, thus daily release is required. 	
	 Positive control is maintained for released work packages not authorized for performance on the daily work release. 	
	 Released work packages not authorized for performance on the work release are formally suspended if work will not commence timely manner. 	
	 Work Release is required for all construction. The mechanism for that work release should be specified in the CWAE or MOU for to construction project. 	
	The Work Release for Construction/Service Organization (WRC: form (A-6004-967) or an alternate form that has been approved the CHPRC Work Management Technical Authority may be usedocument release for work performed by non-CHPRC contractor by another project within the CHPRC.	by d to
	 If there is a low probability of new hazards, the Release Authority may choose to release work on a WRCSOF less frequently than daily. Weekly is suggested, and in rare cases, longer could be appropriate. 	•
Field Work Supervisor (FWS)	 All field work shall be supported by a procedure or work document. Authorized work documents are Minor Work Ticket, No Additional Planning Required, Planned Work Instructions, or a Subcontractor w document generated via a Statement of Work or CWAE. 	vork
	 The FWS is responsible to ensure the workers are familiar with t work to be done by performing the following prior to conduct of t pre-job briefing: 	
	 Confirm worker training and qualification using available tools, or verify that this was already confirmed by support staff according project processes. 	

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Action	nee Sect 3.2.5.	Action
NOTE:	The Worker Authoriz	ration Matrix (WAM) tool is available from JCS to verify worker

NOTE: The Worker Authorization Matrix (WAM) tool is available from JCS to verify worker training and qualification for all workers in PeopleSoft.

Field Work Supervisor (FWS)

- Review work instructions (procedures, WD, etc) for adequacy and usability.
- Regardless of the work type, conduct a formal or informal pre-job briefing with the fieldwork team per PRC-PRO-WKM-14047, *Pre-Job Briefings and Post-Job Reviews*, and CHPRC-00073, Articles 324 and 351. An attendance roster is required for some informal briefings as identified on the WHA for skill-based work (site form A-6004-539).
- For radiological work, review the work instructions, RWP, AJHA and ALARA documentation (as applicable) to verify controls are adequate to mitigate the hazards presented.
- Ensure workers understand that they must obtain RCT concurrence prior to working in any radiologically controlled area, including RBAs.

NOTE: See Appendix D for guidance on use of Working Copies in the field.

- If there is a partial release, ensure the workers understand what is authorized for work that day.
- Review all hazards and controls identified for the work activity.
- Discuss any special tools required for the work activity.
- Call attention to any special instruction steps for SSCs that are SS, SC, ITS, Hoisting and Rigging, etc., that require inspection of materials for suspect/counterfeit items, special system testing or documentation, QC inspections, etc.
- The workers must verify that conditions in the field are as expected. Consider whether to conduct a pre-job walkdown with the workers before work begins to confirm that the hazards and controls captured in the WD correctly reflect current conditions in the field. A pre-job walkdown is required for all work determined to be beyond skill-based, and all skill-based work that triggers the double asterisk (**) on the *Worksite Hazards Analysis for Skill-Based Work* form, A-6004-539. If it is not safe to conduct a walkdown due to safety, environmental or ALARA concerns, video cameras, pictures, etc., may be used in lieu of an actual field walk down.
- Remind the workers about special instructions regarding panelboard modifications performed at the Plutonium Finishing Plant (PFP). See Appendix G.
- Ensure workers understand that the work instructions are to be followed as continuous use procedures (step-by-step). If the work instructions allow deviations, ensure that the workers understand the limits of the approved flexibility.

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Actionee		2.5.	Action
		0	Ensure approved procedures are the current revision by verifying in docs online.
		0	If a facility/project administrative procedure designates the use type for work documents, ensure the workers understand that process, the use type of the work document, and the impact on the work to be performed.
		0	If work will be conducted using approved procedures, ensure the workers know the procedure use type (continuous, reference, info) and understand management's expectations in that area.
		0	Review pertinent lessons learned information with the work team.
		0	Ensure that individuals who are new to the work team or who are borrowed from other projects, companies or vendors clearly understand the hazards and controls, emergency responses, and other points related to the task that the in-house work team might take for granted as common knowledge.
		0	If ladders will be used, approve ladder use per PRC-RD-SH-24243, Portable Ladders.
		0	If the work involves shipment of hazardous materials, ensure that the shippers are available to coordinate per PRC-PRO-TP-156.
		0	If the work involves electrical conductors, discuss electrical safety requirements. These requirements should be documented on Form A-6005-322, or another means that covers these items.
			 If the work involves electrical look-alike equipment, identify what method shall be employed to alert employees as to what equipment is inside or outside the scope of the work instructions.
			 Discuss arc flash and shock hazard, LAB, PAB and RAB for this work.
			 Discuss PPE appropriate for this work based on the arc flash and shock hazard analyses.
Workers, FWS, CM, or	FWS, CM , or		fely perform the work as specified in the approved work package, ying attention to the following:
facility- identified POC		a.	If the work is skill-based, conduct a Worksite Hazard Analysis for Skill-Based Work, or confirm the conditions of an existing WHA. Use site form A-6004-539 and PRC-PRO-WKM-079.
		b.	For all work, verify that conditions at the work location, including hazards and controls, are as they were discussed at the pre-job briefing. Bring any anomalies to the attention of the FWS before starting work.
		c.	Hang authorized worker locks and perform safe-to-work checks per

DOE-0336, Hanford Site Lockout/Tagout.

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	d.	Perform only "released" tasks or "no release required" tasks specified in the work package. If the RA has issued a Partial Release, ensure you understand what is released for work.
	e.	Verify that controls are established as described in the work instructions and are appropriate for current conditions. If changes are needed, stop and immediately notify the FWS.
	f.	Periodically verify that hazards remain as anticipated in the work instructions. Notify FWS immediately if changes occur.
	g.	Monitor work activities and conditions in the work area.
		 Follow the work instructions in a step-by-step manner unless otherwise authorized in the approved instructions.
		 Complete any records, data collection, required signatures, etc.
		 Observe Hold Points.
		 Be attentive for hazards not addressed in the Pre-Job Briefing or work package.
	h.	Work with FWS to resolve issues or newly identified hazards
	i.	Document activities or issues in the work package (work record).
	j.	Verify housekeeping is acceptable prior to returning equipment or systems for restoration.
	k.	Remove authorized worker locks per DOE-0336, when work is complete or as required to support the work activity.
	l.	CHPRC shall provide appropriate safety and technical direction to all personnel working at CHPRC facilities. This is accomplished through the FWS.
		 All workers are expected to check in with the appropriate supervisory or facility personnel each day prior to beginning work.
		 Each facility or work release point should be prepared to provide a Point of Contact for workers not attached to that facility or working group (borrowed crafts, construction forces, vendors, etc.).

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> m. When the work team is being supervised by a CHPRC employee and includes workers for whom CHPRC is not the responsible company, the borrowed workers will follow all CHPRC policies and procedures. Work teams from other DOE prime contractors (e.g., MSA) that are performing their normal work on CHPRC property but being supervised by their management team (e.g., Refrigeration Services, Fire Systems Maintenance, Hanford Fire Testing) will conduct work according to their companies policies and procedures. These work teams are required to check in with and obtain work release from the facility/project where the work will occur. For further details, consult the MOA between MSA and CHPRC available on the CHPRC Interface Management website.

FWS 8. Monitor work progress and facilitate the needs of the work team.

- The FWS is not required to be physically present with the work team at all times, but must always be reachable, typically by cell phone or radio. In general, the FWS should be present during work steps that have been designated as "critical steps," steps that involve increased hazard to the workers or the environment, or steps that drove a formal pre-job briefing per PRC-PRO-WKM-14047. The work team should clearly understand if there are work steps that should not be performed until the FWS is present.
- The work instructions must be in the field with the work team. If the work package also contains a large volume of supporting documents, the FWS may choose to take the work instructions to the field and leave the rest of the work package in an office location. It is the responsibility of the FWS to ensure that all documentation is reunited before submitting the work package for restoration and retest.
- a. If work includes the use of M&TE and the JCS is used to support reverse traceability, then coordinate with work control center personnel to assure that the JCS data base is updated to reflect the M&TE usage as soon as possible, not to exceed 20 working days from the date of use. For work packages that continue for several days or longer, or that are used repeatedly on a periodic basis before being closed out, this may require interim conversations with work control to assure that Notice of Discrepancy (NOD) issues are properly monitored. See PRC-PRO-MN-490 for additional information about NODs.
- b. If responsibility of the work by the FWS transfers to another FWS the turnover of this responsibility should be documented in the work package.
- c. Ensure that the work is released before beginning each shift. Most work is released daily, but the Release Authority may choose to release work for longer periods of time at non-nuclear facilities or where hazards have a low potential to change.

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- d. Make appropriate entries in the Work Record, especially when a change has been incorporated into the work instructions, or if the work is being done out of order and the steps do not have individual signature blocks.
 - A good practice is to make an entry with a short summary of the day's progress at the end of each shift when work is performed.
 - Status and progress entries should be of sufficient detail to provide clear communication of work steps completed, work steps remaining, and current status of LOTO or other unique Facility or job conditions, as applicable.
- e. For work that continues over multiple days, ensure at the end of each work shift that the work package reflects accurately the work that was completed during that shift.
- f. If permitted by facility-specific procedures for technical procedure use and compliance, steps in a procedure may be repeated as necessary if the FWS verifies the same facility conditions/system alignment exists as those that existed for original performance of the steps, or if the procedure had been performed in its entirety. Document the re-performance per local administrative procedure, or in the work record.
- g. Verify all released work was completed, or take appropriate action to change the work instructions if the work cannot be performed as written.
- h. Ensure the work area has been left in a neat and orderly condition, tools and materials stowed appropriately, etc.
- If unexpected conditions are encountered, work area conditions have changed since the work activity was planned, or any situation arises that requires reanalysis of hazards or changing the work package, go to step 12.
- i. If work is successfully completed, verify completeness of the WDs and sign off for field work completion on the WD and go to step 9.

- 9. Ensure FMP is signed off as work complete with the original being transmitted to document control services and a copy placed in the work package. If only a portion of the FMP is work complete and the rest will be performed in additional work packages, perform the following:
 - Incorporate the completed portion of the FMP affecting configuration baseline drawings via the In-Process Redline Process per PRC-PRO-EN-20050.
 - Document the portion of work completed in the work record including the satisfactory completion of any retest, as defined by the FMP

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NOTE: Individual Projects and Facilities may have additional requirements related to

modifications and configuration control. The DA/TA is responsible to be aware of

and ensure compliance with these requirements if they exist.

Release Authority 10. Restore the systems released for field work as follows:

- a. For modifications,
 - Verify those items marked on the MIR as Required Before Retest have been completed prior to recovery and retest unless otherwise stated in the approved work instructions.
 - A person knowledgeable and experienced in electrical installation practices and NEC requirements shall inspect the work before the installation or modification is energized. See PRC-RD-SH-11827 for details.

NOTE: The package may have to be suspended for final implementation of the identified changes if the changes are not completed but have been identified as required prior to retest on the MIR.

- b. If a controlling organization LOTO is in use, per DOE-0336 clear the LOTO upon field work completion, or as directed in the work instructions.
- c. Restore the equipment/system to operability or place it in the configuration directed in the work instructions.
- d. Test the equipment/systems using approved retest instructions contained in the work package or operating procedures.
- e. For nuclear facilities, complete any required documentation for system operability verification.

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Acceptance Authority	acceptand instruction been met be review maintena	rk performed is acceptable, comparing test results with the criteria or operating parameters specified in the work as or operating procedures to determine if work objectives have. For nuclear facilities, completed work control documents shall the ed in a timely manner to check proper completion of the work and to verify that corrective action resolved the DOE G 433-1).

NOTE: Work that was No Release Required (NRR) does not require Work Acceptance by the Acceptance Authority; you may enter "N/A" in the Ops Acceptance field.

- a. Ensure all documentation is complete.
 - For modification work, ensure required actions are complete as outlined by the Modification Impact Review (MIR).
 - Items marked as Required Before Retest should have been completed prior to recovery and retest. If this was not done, ensure these items are completed before accepting the work.
 - Items marked Required Before Closeout may be completed after Ops Acceptance (retest), but must be completed before final closeout of the WD.
 - If procedure changes are not required at the time of completion of the modification, but will be required in the future, the MIR may be signed off if an alternate tracking mechanism for the change is specified, such as another work package, a readiness review, etc.
- b. If the test results are acceptable, sign off acceptance of work on the WD and continue with work package closeout in accordance with instructions contained in Section 3.2.6.
- c. If the test results, documentation, etc., are not acceptable, go to step 12.

FWS or Planner

12. Resolve the issue as follows:

- Document the issue and resolution in the work record or WCN. If issue is resolved without the need for work instruction changes or field work, go to <u>Section 3.2.6</u>.
- b. Incorporate necessary changes into the work package in accordance with the instructions contained in Section 3.3.2.
- c. If work instruction changes are not required but work conditions have changed, reanalyze the hazards and related controls.
- d. If work will continue, return to step 4.

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Actionee Sect Action

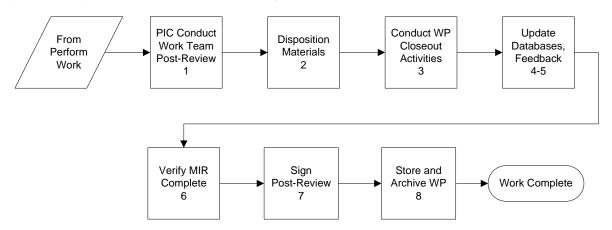
- e. If the work will not continue (i.e., significant delay in field work), go to step 13 to formally suspend the work.
- f. If the issue resolution is done by the Planner, the FWS needs to agree with the resolution before continuing.
- 13. Suspend the work package working with the Release Authority as follows:
 - a. Determine a safe configuration in which to leave the equipment/system.
 - b. Release Authority to implement controlling organization LOTO controls in accordance with DOE-0336.
 - c. Verify that suspension of the work package does not invalidate USQ screening or evaluation that was performed in anticipation of the work, especially if there is not a clear path forward for continuation of the work.
 - d. If the work package is a modification, review the MIR form and consider whether any actions that have already begun, such as procedure changes, training, label requests, spare parts inventory changes, etc. should be stopped or reversed. This would normally only apply if there is no clear path forward for continuing the work.
 - e. Document the work suspension on the hard copy of the work package.
 - f. Update JCS files with the Work Suspension status.
 - g. Re-enter the work process where appropriate to resolve suspension reason.

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3.2.6 Closeout Work

After work acceptance, the work package moves into a Closeout phase. The work team goes into a cleanup and feedback mode. Some actions listed here by the field team may be performed prior to the retest if directed by the FWS.



Actionee	Sect 3.2.6.	Action
	<i>3.2.</i> 0.	

FWS

- 1. Complete the following final closeout activities no more than 30 days after the work has been performed. Management concurrence is required to establish a new due date, documented in the work record:
 - Document actual hours worked on the WD.
 - Conduct a post-job review of the work, involving the work team using a graded approach, i.e., tailoring the review to the work performed in accordance with PRC-PRO-WKM-14047 and CHPRC-00073, Article 351, for radiological work meeting the criteria for when postjob reviews are required.
 - Document feedback or lessons learned in the narrative log of the work package, on a post-job review form, Activity Level Feedback Summary Form, or similar mechanism that will allow the comments to be captured during Post-Review.
 - Identify feedback that needs to be retained in the AJHA Activity Level Feedback Database by marking the feedback column of the work record.
 - Review and document formal lessons learned in accordance with PRC-PRO-MS-067, *Managing Lessons Learned*, if appropriate.
 - Review work package to determine that the work instructions have been completed, are legible and accurate, reflect the work that was accomplished, and demonstrate compliance with the stated requirements.

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Actionee	Sect 3.2.6.	Action
	0	Evaluate whether there are any changes that were made to the work instructions that need to be backfitted into support documents such as the AJHA to provide the best possible resource for future work activities of a similar nature.
	0	Verify PM/S data sheets are complete, in tolerance, and signed in accordance with the work instructions / procedure. If these conditions cannot be met, annotate the reason and verify management and the DA/TA have been notified in accordance with PRC-PRO-MN-19304.
	0	Verify data collection required by the work instructions is complete.
	0	Verify Field Work Complete has been signed. Administrative packages (no field work) should be marked N/A, or may be signed by the DA/TA or other person given that responsibility and authority by facility management.
	M C E e- cc	isposition unused materials obtained for the job in accordance with SC-PRO-140, <i>Utilizing General Supplies, Spare Parts, and convenience Storage Inventories,</i> or PRC-PRO-PMT-144, <i>Disposition of xcess Property.</i> If face-to-face communication is not possible, send an email to Material Services stating whether material was left over from a completed job, or if the material should be held in short term or long term orage, or excessed. The goals for materials left after a job include:
	0	Turn over extra or unused materials or equipment to Support Staff responsible for material management.
	0	Review with Material Coordinators and determine if material can be reallocated to another work package, excessed, returned to spare parts, etc.
	0	Evaluate material/equipment used or taken into radiological areas for radiological release prior to removal. Contact project/activity Radiological Control organization for assistance, if needed.
	0	Disposition of unused material from construction projects, deactivation and decommissioning projects and production process.
Support Staff	3. C	onduct work package closeout activities and post-review.

NOTE: All process signatures within the work package, including Post-Review, must be accompanied by the person's printed name and the date. See <u>Section 3.1.1</u> for details.

- This review will include the following actions:
- Ensure that all supporting documents and work instructions, change notices, work record and other elements listed in the Table of Contents or References section and not designated as INFO are included in the Document Record Folder. If elements are missing, contact the FWS.

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Actionee	Se 3.2		Action
		0	Review package for completeness, legibility and accuracy in accordance with PRC-PRO-IRM-10588, <i>Records Management Processes</i> .
		0	Ensure resolution of any actions identified during the post review process have been initiated.
		0	Ensure identified Lessons Learned have been documented in the AJHA Activity Level Feedback Database. Check Post-Job Review form and Work Record for items identified by the FWS for this purpose.
		0	Ensure formal Lessons Learned have been submitted to the Lessons Learned Coordinator in accordance with PRC-PRO-MS-067.
		0	Route periodic maintenance packages in accordance with PRC-PRO-MN-19304.
		0	Ensure datasheets are closed for Periodic Maintenance activities.
		0	Ensure Changes/corrections to WDs have been recorded in accordance with <u>Section 3.3.2</u> .
		0	Review work package to ensure all required blocks are complete. Data entry fields and signature fields must be completed, be lined out or marked N/A; other fields for which there could be no perception of missing data may be left blank. This post-review verifies the document is complete and accurate.
		0	Verify any FMP cover sheets have been taken to Document Control to record completion signatures and dates.
		0	Verify all FMPs have been listed in the "Facility Specific Requirements" block of the MIR.
		0	Verify that Property Management actions have been taken.
	4.		odate necessary databases (e.g., AJHA, job-specific RWP, JCS fields) th complete status and necessary technical or post-review data.
	5.		tiate the process to backfit feedback information into support cuments as annotated by the FWS (see step 1).
	^	١/-	with the MID has been assembled as designated

Disposition Schedules (RIDS) for the facility/project in accordance with PRC-PRO-IRM-10588.

7. Print name, date and sign the post-review block. Signature for post

8. Store and archive the work packages in accordance with Records Management Requirements as outlined by Records Inventory and

review validates completion and accuracy of the record.

6. Verify the MIR has been completed as designated.

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Actionee	Sect 3.2.6.	Action
	0	Identify and process Radiological records in accordance with CHPRC-00073.
	0	Identify and process Environmental records in accordance with PRC-RD-EP-15332.
	0	Document the Records Holding box number in the Location field when archiving records.
	0	Verify signature logs are included or alternate means of record authentication have been satisfied for the documents in each box.
	0	Verify pagination; either each page within the work document must be numbered sequentially (work instructions, supporting documentation, permits, etc.), or each individual document within the work package must be paginated and a list of all those documents, such as a table of contents, is provided within the work package.

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3.3 Work Management – Level 3 Process Maps

3.3.1 WD Style Selection

3.3.1.1 Style Selection

When emergency situations arise, stabilize the emergency in accordance with <u>Section 3.2.1</u>. Additional requirements for work on Safety Class, Safety Significant, Defense-in-Depth and Important to Safety (ITS) SSCs are found in hazard category 2 or 3 nuclear facility TSRs. If follow-on actions are required, the following can be used to determine the appropriate WD style.

There are three styles of WDs that can be used depending on the need for detailed work instructions and positive control of the approval and release process. ALL WD styles must be retained as records in accordance with PRC-PRO-IRM-10588, including MWTs.

- 1. <u>Minor Work Ticket</u> A simple WD that performs pre-approved tasks as outlined in <u>Appendix E</u> where no formal tracking is required. Record retention is required for all work.
- 2. <u>No Additional Planning Required (NPR)</u> A WD that performs either pre-approved tasks as outlined in <u>Appendix E</u>, or periodic maintenance and surveillance tasks generated as defined by PRC-PRO-MN-19304 or recovery actions per other pre-approved procedures.
 - Any current, approved technical procedure may be worked under an NPR WD, even if the work described is beyond skill-based. The assumption is that hazards analysis and planning have already been performed and approved and have not exceeded the expiration date. Only minimal approvals are required on the WD, i.e., it is not necessary to duplicate the approvals already carried by the procedure. Operations and Radiological Control procedures are considered stand-alone and are not required to be contained in a work package or released by the RA to be performed.
 - Activities that are recalled periodically are packaged and processed according to PRC-PRO-MN-19304. If an activity is pursued as a minor corrective maintenance per an item listed in <u>Appendix E</u>, Table C, and it is determined that the problem can be solved using an existing procedure or activity that would normally be issued via PRC-PRO-MN-19304, consult with the local PM Coordinator to determine the best path forward.
 - If approved document was prepared externally, verify that approvals, hazards analysis, and facility configuration demonstrate program compliance. Supplemental instructions may be required to achieve compliance with CHPRC programs.
 - o If approved procedures do not completely describe how to perform the desired work activity safely and correctly, they must be supplemented with original work instructions. In this case the integrated instructions must be reviewed as a whole entity. That is, hazard analysis, the flow of the work, and approvals must be conducted as if it were one new document. This type of work will be considered planned instructions, not NPR.

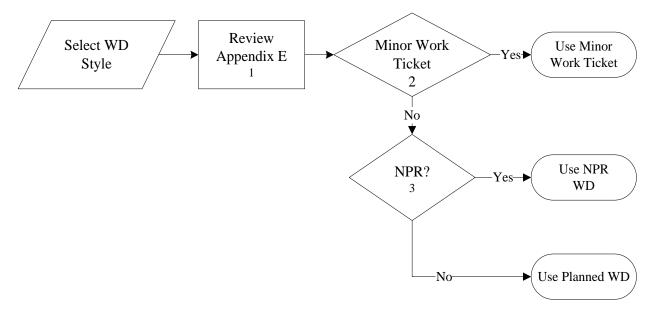
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3. <u>Planning Required</u> - A WD that performs an infrequent, first-time or complex activity that requires supplemental work instructions.

This section defines the graded approach used to determine if a style other than a Planned WD may be selected. Appendix E, Table C identifies tasks that may be performed using a Minor Work Ticket or NPR style of WD.



Actionee	Step	Action
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Planner

- 1. Review Appendix E.
 - For radiological work, obtain Radiological Hazard Screening information from the Rad Con organization. (Reference PRC-PRO-RP-40108)
- 2. Compare work scope and known hazards to Minor Work Ticket criteria listed in Appendix E, Table A.
 - a. If work scope meets all of the listed criteria in Table A prepare a MWT (A-6004-645) and go to Section 3.2.4, Schedule Work.
 - b. If work scope does not meet the criteria, go to Step 3.

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Actionee Step Action

3. Compare work scope and known hazards to NPR Criteria listed in Appendix E, Table B.

 a. If work scope meets all of the listed criteria in Table B, prepare a NPR WD, ensuring completion of support documents (Rad Screening, USQ, etc.) and go to step 3.2.3.32, Pre-Work Review.

NOTE: If an approved procedure will be utilized to perform work in a NPR-style work document, it is assumed that all requirements of planned work instructions have been met during the development of the procedure using normal administrative processes. The criteria of Table B do not need to be applied to the WD.

- b. If work scope does not meet NPR criteria, use a Planned WD Style.
- 4. If work scope does not meet the criteria of either Table A or B, go to Section 3.2.3, Plan Work.

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3.3.1.2 Guidelines for the use of Standing Work Documents

All three styles of work documents may be used as standing documents intended for re-use.

Actionee	Step	Action
FWS / Planner	1. F	Projects or facilities may generate new WDs for each use, or they may
/ Work Control	u	ise "standing" documents more than once for recurring work. Use of
Staff	tl	hese "standing" WDs is acceptable if the following precautions are
	fo	ollowed.

- a. The WD must clearly state the scope of the work and describe the work location and, when appropriate, a planned step sequence (graded approach).
 - The scope description for planned work instructions must be detailed enough to support the development of effective and accurate hazard controls for the proposed work activity.
 - If the WD is a MWT or NPR it must comply with the tables in <u>Appendix E</u>, and be clear to the worker regarding the boundaries of the work and the hazards and controls for that bounded work.
 - Verify that working references are up-to-date. Correct deleted or superseded references; delete out-of-date requirements drivers.
- b. At each use of the document the FWS must consult with the Radiological Work Planner to determine whether the RWP previously used is still appropriate. Radiological Hazard Screening should be reviewed or revised whenever an AJHA is reviewed or revised, or when radiological conditions have changed in the vicinity of the work activity.
- c. At each use of the WD, the hazards of the work location must be addressed in addition to the hazards of the work itself.
 - The requirements of the tables in <u>Appendix E</u> restrict the use of MWT or NPR documents for work activities unless the hazards for the work have already been analyzed and documented as skill-based.
 - Pay particular attention to changes in the work environment that might have occurred since the last hazard analysis.
 - Use the WHA for skill-based work, Site Form A-6004-539, to address hazards at the work location for skill-based work.
- d. At each use of the document the FWS must determine that beryllium issues have been evaluated. See Appendix J for skill-based work in Beryllium Controlled Facilities.

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Actionee Step Action

- e. Each "standing" WD document must be periodically closed out, and if still needed, new documents generated in order to force a fresh look at scope, hazards, and applicability.
 - Planned work instructions for which an AJHA was not performed (skill-based) are valid for up to three years, and must then be closed out and a new document generated, if still needed.
 - MWTs and NPRs are each valid for up to one calendar year, and then must be closed and a new document generated.
 - Planned work instructions for which an AJHA was performed will be regenerated when the AJHA expires.
 - Radiological Hazard Screening in accordance with CHPRC-00073 must be performed each time a new document is generated. FWS will consult with the Radiological Work Planner to verify the screening is still valid and to verify that the correct RWP has been designated.
 - The Radiological work screening should be reviewed/revised when an AJHA is reviewed or revised, or when radiological condition change (CHPRC-00073, Article311, 312).
- 2. Standing documents that have been generated for similar work in various locations must clearly identify at each use what and where the intended work is. This is usually done via a Partial Release.

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3.3.2 Change Work Package

Issues encountered during the Perform Work Function (Section 3.2.5) may require a work package change to resolve an issue. Changes may involve a support document (permits, design documents, pre-approved procedure, data sheets, etc.) or self-contained work instructions. Support document changes are made using the processes that control these documents, unless direction is specified in this section. These processes may also change the support documents through periodic review, because of corrective actions, or in other ways that do not initiate with the work package itself. Although these other processes can be relied upon for administrative concerns such as hazards analysis, USQ review, etc., it is possible to overlook the impacts on subsequent work activities that utilize these support documents. Whether a change to the WD is a result of issues encountered in the field during performance of work, or the work instructions must be changed to comply with updated support documents, a technical review of the WD must occur prior to continuing on with the work activity.

Changes made to administrative sections of the JCS (i.e., classifier codes, charge code information, etc.) prior to printing of the record copy do not need to be documented. If changes are made after the record copy has been printed, initial and date the change. Pen and Ink Changes are allowed to change charge codes, resource codes, priority codes, and other information outside the work instructions and retest. Supporting documents must be changed following the applicable administrative procedure; however, the fact that they were changed should be noted in the work record as a good practice.

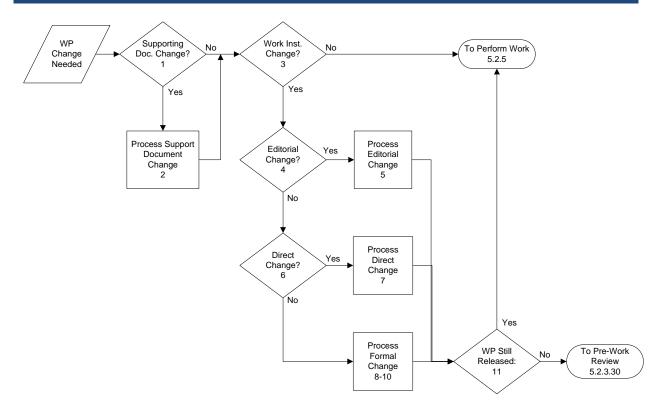
MWTs and NPRs are changed via pen and ink or as editorial changes. In changing these documents one must be careful not to exceed the boundaries that were established when the work document was generated – that is, the work activity must still meet the criteria for that style of work in Appendix E.

NPRs that are utilizing approved procedures may require a procedure change through normal administrative processes.

Three methods are available to change planned work instructions: Editorial Change, Direct Change or Formal Change.

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Actionso	Sect	Action
Actionee	3.3.2.	Action

FWS or Support Staff

- Determine if a change is needed to a supporting document contained in the work package. If not go to step 3.
- **NOTE:** Review WD to determine if working copies have been generated. If so, document changes to working copies also.
 - Construction Work Packages for CHPRC-performed construction are changed and controlled in accordance with PRC-PRAC-CN-30374, Construction Work Packages, and implemented in accordance with a planned work package by organizations as agreed to in the approved CWAE or MOU for the construction project.
 - 2. Process the necessary change to the supporting documents.
 - a. Identify the procedure that controls changes to the support documents. PRC-GD-WKM-12116 is a useful resource as it lists many of the controlling documents.
 - b. Work with the document owner to revise or reissue the supporting document with the necessary changes.
 - Changes to approved procedures much be processed in accordance with the respective administrative procedure.

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- The DA/TA will need to provide an approved FMP/FMP change for modifications (See PRC-PRO-EN-2001). Consider whether the change will require that a non-modification package must now be considered a modification. All required forms and documentation must be added to the work package before work may continue. If the package was already designated as a modification, consider whether the MIR must now be amended because of the work package changes.
- Changes to RWP or other permits are accomplished by the respective SME or TA.
- c. For situations where a minor change to an FMP is needed during a job and the job would need to be shutdown in order to process an FMP Change, the current FMP may be red-lined to allow work to continue if all the conditions stated in PRC-PRO-EN-2001 are met, including:
 - The change is significantly minor in nature that it has no affect on the function or purpose of the FMP.
 - The change does not affect any Safety Class (SC), Safety Significant (SS), Defense-in-Depth (DID), or Important-to-Safety (ITS) Structures, Systems, or Components (SSCs).
 - As determined by a qualified USQ Evaluator, the change is either:
 - i. editorial and meets the criteria for a GCX-2 Editorial Change to Existing Document or,
 - ii. technical and will require either a revision to the applicable USQ or a new USQ screening.
 - If a revised USQ or new screening is required, this shall be performed prior to continuation of the work.
 - The change is directed by the DA and red-lined on the current FMP used in performing the work.
 - The DA approves the change next to the red-line on the current FMP.
 - The change is processed using a WCN (a direct change is only appropriate for changes to the work instructions themselves).
 - The red-line change is documented on an FMP Change, approved, and provided to Document Control prior to completion of the work activity or as specified in the work instructions. The released FMP Change shall be added to the Work Package prior to turnover to Operations and Work Management documentation close-out.

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Sect Action Actionee 3.3.2. If these conditions cannot be followed, work must be stopped until an FMP Change or FMP Revision can be processed. d. Determine if the support document change introduces new hazards or potential changes to radiological conditions. If it does, then a reassessment of the hazards following PRC-PRO-WKM-079 and PRC-PRO-RP-40108 is required. Document in the work record that this hazard review was conducted, and whether or not JHA changes will be necessary. e. If the AJHA was updated, review and/or revise the Radiological Hazard Screening per PRC-PRO-RP-40108. Insert the applicable supporting document changes in the work package folder. Include updates to hazard controls if any were documented per steps d and e above. FWS/Work g. Document that the support document was changed and incorporated into the work document by either a direct change OR by processing a Planner formal change. The FWS shall approve incorporation of the changed support document and agree that it resolves the issue (that required the change) before continuing work on steps to which the change applies. h. Changes to support documents could affect the previous USQ determination for the work package. For changes to work packages that have previously been USQ reviewed, either the previous USQ documentation must be revised, new USQ documentation must be generated, a General Categorical Exclusion (GCX) must be applied, or the USQ process must be determined to be "not applicable" per a cited reference. 1) For Hazard Category 2 or 3 Nuclear Facilities, have qualified personnel identify on the Work Record or WCN the USQ GCX or approved USQ screening or evaluation that applies to the change. See PRC-PRO-NS-062 for requirements and qualification of personnel applying USQ GCXs.

personnel applying USQ GCXs.

 For changes related to Transportation and Packaging involving greater than A2 quantities of radioactive material, have qualified personnel identify on the WD the USQ GCX or approved USQ

screening or evaluation that applies to the change. See PRC-PRO-NS-062 for requirements and qualification of

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- i. For released work packages, obtain Release Authority concurrence and document approvals on the WD. Approvals may be per telecom. Release Authority will determine whether the support document change affects facility configuration control, hazardous energy boundary, LOTO, or other technical or administrative issues that could affect release of the work package and take appropriate actions based upon this determination.
 - If a work package was formally suspended while the change was made, the Release Authority concurrence and approval will be obtained through the pre-work review and release processes. If so, go to <u>step 3.2.3.32</u>.

NOTE: If the Release Authority is serving as the FWS of the work activity and is reflected as such on the work record or Pre-Job Briefing Checklist, the FWS approval signature is not required.

- 3. Determine if a change is needed to the work instructions.
 - a. If no additional changes are required,
 - Go to <u>step 3.2.3.32</u>, pre-work review, if work package was suspended, or
 - Go to <u>Section 3.2.5</u>, Perform Work, if work package is still released.
 - b. If a change is needed to the work instructions go to step 4.
- 4. Determine if an Editorial Change is the method best suited to implement the change.
 - An editorial change is a change that meets the applicable requirements for the information being changed and is implemented as a handwritten change (deletion/addition) made by the FWS or Support Staff in the field using permanent (not water-soluble) ink. See also Pen and Ink Change.
 - Editorial changes are subject to PRC-PRO-NS-062 at hazard category 2 and 3 nuclear facilities and for Transportation and Packaging involving >A2 quantities of radioactive material.
 - o Per PRC-PRO-MS-589, *CH2M HILL Plateau Remediation Company Procedures*, editorial changes may include the following:
 - Format changes that do not alter the technical content of the document or modify the work activity hazards.

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- Correction of grammatical, typographical, or spelling errors that:
- Do not affect numbers other than page, table, figure title numbers, or obvious and demonstrable typographical errors. (Changes in decimal points, units of measure or nameplate information/data are not editorial changes.)
- Do not affect units of measure other than obvious and demonstrable typographical errors.
- Do not affect acceptance criteria other than obvious and demonstrable typographical errors.
- If the change meets the criteria above, go to <u>step 5</u> to implement the editorial change.
- If not, go to <u>step 6</u> to determine if the proposed change is a direct change.
- 5. Implement an Editorial Change as follows:
 - Draw a single line through deleted text and insert new text in a legible manner using permanent (not water-soluble) pen and ink.
 - Enter the date and sign or initial next to the change. Make an entry on the Work Record that the change was made, print, sign and date.
 - For Hazard Category 2 or 3 Nuclear Facilities, have qualified personnel identify on the WD or WR the USQ General Categorical Exclusion (GCX) that applies to the change. If a USQ screening or evaluation is required for the change, the change is NOT editorial. See PRC-PRO-NS-062 for requirements and qualification of personnel applying USQ GCXs.
 - For changes related to Transportation and Packaging that involves >A2 quantities of radioactive material, have qualified personnel identify on the WD the GCX that applies to the change. See PRC-PRO-NS-062 for requirements and qualification of personnel applying USQ GCXs.
 - When change documentation is complete, go to step 11 below.
- 6. Determine if the Direct Change method is best suited to implement the change.
 - a. A Direct Change must meet the following criteria:
 - Direct Changes should not deter from readability of the work instructions.
 - If the work instructions become confusing due to size or number of changes required, the Planner should use a Formal Change process.

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Actionee Sect 3.3.2.	Action
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- b. If the change meets these criteria, go to step 7 for directions on implementing a direct change.
- c. If a Direct Change is inappropriate for the required change, go to step 8 and process a Formal Change.

7. Implement a Direct Change as follows:

- Identify if the Direct Change introduces new hazards or changes existing hazards or controls. If it does, then a reassessment of the hazards and/or controls is required per PRC-PRO-WKM-079.
- Identify deletions, additions, references or sequencing changes by carefully reviewing the resolution descriptions and criteria provided in PRC-GD-WKM-12116.
- Identify approval disciplines per <u>Appendix L</u> and facility specific procedures, if applicable.
- Describe the change in the Work Record.
- For changes to work packages that have previously been USQ reviewed, either (a) the previous USQ documentation must be revised, (b) new USQ documentation must be generated, (c) a GCX must be applied, or (d) the USQ process must be determined to be "not applicable" per a cited reference. For Hazard Category 2 or 3 Nuclear Facilities, have qualified personnel identify on the Work Record the USQ CX or approved USQ or evaluation that applies to the change. See PRC-PRO-NS-062 for requirements and qualification of personnel applying USQ GCXs.
- For changes related to Transportation and Packaging that involves >A2 Quantities of radioactive material, have qualified personnel identify on the WD the USQ GCX or approved USQ screening or evaluation that applies to the change. See PRC-PRO-NS-062 for requirements and qualification of personnel applying USQ GCXs.
- o If the original work instructions or the proposed change deal with work that is beyond skill-based, review HRB criteria per PRC-PRO-WKM-40004 and document this on the Work Record, or include a hard copy of the criteria. Notify the HRB Chairperson if the change impacts the original HRB determination or triggers criteria that were not triggered during the original determination. Site form A-6004-704, HRB Screening Criteria, may be used to document the screening for a Direct Change. JCS provides HRB fields for a formal WCN.
- Obtain Release Authority concurrence and document approvals on the work record. Approvals may be per telecom.

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3.3.2.

Draw a single line through deleted text and insert new text in a legible manner using permanent (not water-soluble) pen and ink. Initial and date next to the entry, and make an entry in the Work Record that the change was incorporated, print, sign and date, or – utilize any incorporation method discussed for Formal Changes in step 3.3.2.9 below.

The FWS shall approve the change and agree that it resolves the

NOTE: If the Release Authority is serving as the FWS of the work activity and is reflected as such on the work record or Pre-Job Briefing Checklist, the FWS approval signature is not required.

When change documentation is complete, go to <u>step 11</u> below.

issue before continuing work on steps to which the change applies.

8. Process a Formal Change as follows:

- Identify if the Formal Change introduces new hazards or changes existing hazards or controls. If it does, then a reassessment of the hazards and controls is required per PRC-PRO-WKM-079.
- Determine whether or not Radiological Hazard Screening must be updated. Radiological Hazard Screening should be reviewed or revised whenever an AJHA is reviewed or revised, or when radiological conditions have changed in the vicinity of the work activity. See PRC-PRO-RP-40108.
- Identify deletions, additions, references or sequencing changes by carefully reviewing the resolution descriptions and criteria provided in PRC-GD-WKM-12116.
- Use the JCS or word processing software to generate a change notice using protocols for that software.
- If the section being changed was previously altered via editorial and/or direct changes, incorporate those changes in the new revision to maintain instruction clarity.
- Contact the DA/TA to identify approval disciplines per <u>Appendix L</u> and facility specific procedures.
- For changes to work packages that have previously been USQ reviewed, either (a) the previous USQ documentation must be revised, (b) new USQ documentation must be generated, (c) a GCX must be applied, or (d) the USQ process must be determined to be "not applicable" per cited reference. For Hazard Category 2 or 3 Nuclear Facilities, have qualified personnel identify on the Work Record or WCN the USQ CX or approved USQ screening or evaluation that applies to the change. See PRC-PRO-NS-062 for USQ requirements and qualification of personnel applying USQ GCXs.

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Action	nee Sect 3.3.2.	Action
	0	For changes related to Transportation and Packaging that involves >A2 quantities of radioactive material, have qualified personnel identify on the WD the USQ GCX or approved USQ screening or evaluation that applies to the change. See PRC-PRO-NS-062 for requirements and qualification of personnel applying USQ GCXs.
	0	If the original work instructions or the proposed change deal with work that is beyond skill-based, review HRB criteria per PRC-PRO-WKM-40004 and document this on the Work Record, or in the JCS HRB fields on the WCN form. Notify the HRB Chairperson if the change impacts the original HRB determination or triggers criteria that were not triggered during the original determination.
	0	The FWS shall approve the change and agree that it resolves the issue (that required the change) before continuing work on steps to which the change applies.
NOTE.	If the Deleges	Authority is consistent at the FIMC of the words activity, and is reflected as

NOTE: If the Release Authority is serving as the FWS of the work activity and is reflected as such on the work record or Pre-Job Briefing Checklist, the FWS approval signature is not required.

- For released work packages, obtain Release Authority concurrence and document approvals on the WD. Approvals may be per telecom.
 If a work package was formally suspended while the change was made, the Release Authority concurrence and approval will be obtained through the pre-work review and release processes.
- 9. Insert the change into the work instructions. Several methods of incorporating approved changes are acceptable, but the overriding criteria are that the work instructions are legible, that there can be no confusion for the workers as to the sequence and content of the work steps, and each version of the work instructions must be preserved for post-review.
 - The entire set of instructions may be replaced with a new set.
 - The pages from the change to the end may be replaced.
 - Only those pages that are affected by the change may be replaced.
 - Additional pages may be inserted with appropriate numbering (such as 15 a,b,c,d) into the existing work instructions.
 - In some cases a clear instruction could be inserted to go to a specified place for additional instructions, but if this option is used, those instructions must also contain a step to return the worker to the correct step in the original work instructions. This method is not preferred, but allowed if it can be done with absolute clarity for the workers.

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Actionee Sect Action

- 10. For consistency, a project or facility may choose a preferred method for change incorporation to be used by its staff.
 - Draw a single line through all deleted steps and/or pages and in a legible manner using permanent (not water-soluble) pen and ink initial and date next to the entry, and add the words "see WCN #x".
 - Insert the appropriate instructions or new pages, depending on the method chosen for incorporation. If old pages are to be removed, you may:
 - staple them to the back of the new ones in such a way that the work team cannot inadvertently work on the wrong page, or
 - remove the pages to the back of the work instructions or other location to preserve them but ensure they are not used in the field, or
 - remove them to a file away from the field. If a file is used, those pages must be retained with the record when it is sent to Records Holding. The old pages may not be discarded – they are part of the permanent record.
 - The signature of the person incorporating the change is a process signature, and therefore the printed name is required. If the person's name is printed via the JCS, then that field stands as the authentication of that signature, but the person should initial next to that printed name so that the initials on the work instruction pages can be traced back to the person. An alternative is to make an entry on the work record stating that the WCN was incorporated, and print, sign, date and initial that entry, or if a signature log is being utilized for the work package, the same information may be located there.
 - If all changes were signed, then a representative sample of the person's initials is not required on the signature log or WR.

NOTE: Keep in mind that the change must be incorporated in a way that is clear to the workers, but also that can be processed effectively and efficiently for archiving when the work is done. For instance, be sure to line through each page that was removed, and if you choose to staple old pages behind the new pages, use one well-placed staple rather than several on each page.

- 11. When change documentation is complete,
 - Go to <u>step 3.2.3.32</u>, pre-work review, if work package was suspended, or
 - Go to <u>Section 3.2.5</u>, Perform Work, if work package is still released or was No Release Required (NRR).

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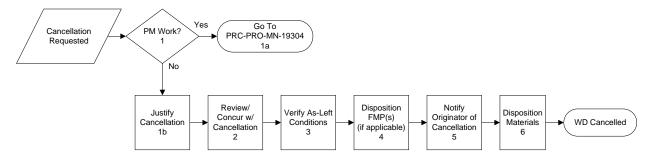
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3.3.3 Cancellation, Inactivation or Reactivation of Validated WDs

WDs may need to be cancelled, inactivated or reactivated. The following sections describe the steps taken to perform these functions.

3.3.3.1 Cancellation of WDs where no field work has been performed



Actionee Step

Work Control Center (WCC) or Planner Determine if the document to be canceled is PM work.

 For periodic maintenance work, refer to PRC-PRO-MN-19304 for cancellation instructions.

Action

- b. For all other types of work,
 - If the WD is a duplication of an open item, enter the work package number of the open item on the WD in JCS.
 - Update the status of the work package in the JCS with the justification for and date of the cancellation.

NOTE: *JCS* is equipped with automatic notification for this function. Use of the electronic record is encouraged.

Validation Authority 2. Review request and provide concurrence (signature/e-mail/telecom) for cancellation.

DA

3. For hazardous category 2 or 3 nuclear facilities, verify that the as-left condition of the asset does not create a non-compliance with the Safety Basis for the facility.

DA

- 4. Ensure all associated FMPs are dispositioned prior to canceling a Modification WD.
 - If work scope/FMP is being transferred to another work package, document the new package number in the Work Record of the package being cancelled.
 - Review the MIR form. Stop or reverse any actions that have already begun, such as procedure changes, training, label requests, spare parts inventory changes, etc.
 - Verify that cancellation of the work package does not invalidate USQ screening or evaluation that was performed in anticipation of the work, especially if this work was part of a larger project or intended to be worked in series with or integrated with other work packages.

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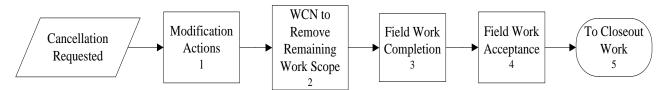
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Actionee	Step	Action
WCC/Facility	5. N	Notify the originator of the WD of the cancellation, noting the reason for
Designated Personnel	t	he cancellation.
		Notify Material Control personnel of cancellation for disposition of unused materials.

3.3.3.2 Cancellation of WDs that have been partially worked

If fieldwork has been performed, the work package is maintained as a record. Remove the remaining scope of work as described below.



Actionee	Step Action
DA	If the WD is a modification, take the following actions as appropriate:
	 formally change the FMP or other engineering documentation
	 review MIR and stop or reverse actions
	 notify Material Coordinators about the changed needs for materials
FWS or Planner	 Modify the WD with a Work Change Notice (WCN) or direct change in accordance with <u>Section 3.2.6</u> to remove the remaining work instructions that will not be completed.
FWS	3. Print, date, signoff field work as complete.
Acceptance	4. Print, date, signoff WD field work acceptance:
Authority	 The facility is in a safe configuration,
	 Closeout does not create a non-compliance with a safety basis for the facility.
	 Closeout does not invalidate a USQ screening or evaluation that was performed prior to beginning the work, and that indefinite continuation of the as-left condition was considered in the USQ screening or evaluation.
	 MIR activities were stopped or reversed as appropriate to the situation.
WCC/Facility Designated Personnel	5. Complete final closeout activities in accordance with <u>Section 3.2.6</u> .

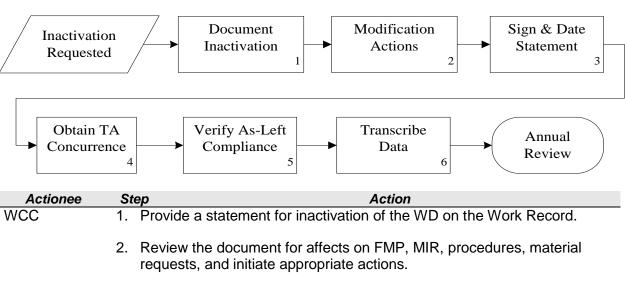
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3.3.3.3 Inactivation of WDs

Inactivation of WDs is performed when the work will be inactive for an extended period of time as appropriate for the project's mission, nominally six month or longer, because of programmatic issues, prohibitive plant conditions, or because the problem is with equipment that is not in use. To inactivate a WD, follow the below steps:



- 3. Sign and date the statement.
- 4. Obtain concurrence from the DA/TA and the Validation Authority.

5. For nuclear facilities, verify that the as-left condition of the asset does

not create a non-compliance with the Safety Basis for the facility and that

it does not invalidate the USQ screening or evaluation that was performed. WCC/Facility

- 6. Transcribe existing data into JCS.
 - Update status as appropriate.

DA/TA

Designated

Personnel

DA

7. Annually review Retent-Inactive WDs. This review may result in re-activation or cancellation of existing WDs, depending on project mission projections.

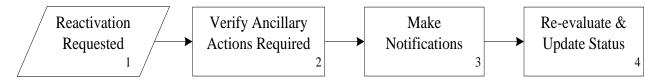
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3.3.3.4 Reactivation of WDs

Reactivation of WDs is a simple process, done whenever it is determined that a previously inactivated WD is now ready to be reactivated and prepared to work.



Actionee	Step	Action
DA/TA	1. De	etermine that an inactivated WD needs to return to an active status.
		valuate the work package for activities that may have been stopped or versed, especially if it is a modification.
	0	Review the MIR, update as appropriate, and initiate actions as necessary.
	0	Obtain current revisions of any support documents.
	0	Notify Material Coordinators of the reactivation and follow instructions on how to proceed based on the specific details for this work.
		otify WCC/Facility designated personnel that the WD needs to be turned to an active status.
WCC/Facility	4. Up	odate status within the JCS and route to appropriate planner to

Designated Personnel 4. Update status within the JCS and route to appropriate planner to facilitate re-evaluation of current hazards, plant conditions, revision of work instructions, USQ, etc. Upon re-evaluation/update, the package may be returned to any step in the Work Management process as deemed appropriate.

NOTE: As a minimum, a walk down with appropriate work team and re-performance of Radiological Hazard Screening is appropriate. Depending on the length of time the WO was inactive, a new hazards analysis via AJHA or other program is advised.

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4.0 FORMS

Arc Flash and Shock Hazard Analysis, A-6005-322

Bill of Material, eBOM

Document Record Folder, manila, 54-6000-202

Document Record Folder, green accordion, 54-6000-801

Environmental Activity Screening, A-6004-962

Hazard Review Board Meeting Record, A-6004-513

Hazard Review Board Action List, A-6004-580

Hazard Review Board Screening Criteria, A-6004-704

Minor Work Ticket, A-6004-645

Modification Impact Review Form, A-6004-963

Pre-Demolition Checklist, A-6004-622

PRC ALARA Management Worksheet, A-6004-634

PRC Pre-Job Briefing Checklist, A-6004-952

Radiological Hazard Screening, A-6004-654

Request for Water Service Tie-In, A-6004-007

Signature Continuation, A-6004-496

Signature Verification, A-6003-003

Work Package Engineering (WPE) Cover Sheet, A-6005-105

Work Release for Construction Service Organizations, A-6004-967

5.0 RECORD IDENTIFICATION

All work management records are generated, received processed, and maintained in accordance with PRC-PRO-IRM-10588, *Records Management Processes*.

Records Capture Table

Name of Document	Governing Procedure	Submittal Responsibility	Retention Responsibility
WDs - Planned, No Additional Planning Required (NPR), Minor	PRC-PRO- WKM-12115 and PRC-	Facility/Project Designated Personnel	Facility retention until no longer needed, then retire to Records Holding in accordance with RIDS.
Work Tickets (MWT), and PMs from JCS including all child forms, such as WCNs, suspensions, partial release sheets, PM datasheets and work records are to be included as well as the work document itself.	PRO-MN- 19304		NOTE: Work Documents that deal with radiological or environmental work must be retained accordingly, that is, in compliance with the RIDS for those types of records.

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	Coverning	Cubmittal	
Name of Document	Governing Procedure	Submittal Responsibility	Retention Responsibility
Job hazard Analysis reports: Hard copies of Standard AJHA Report, Limited Hazards Summary Report, Standing AJHA report, Combined ALARA/Post Job Review	PRC-PRO- WKM-079	AJHA Coordinator/ Field Work Supervisor/ Procedure Technical Authority	Record copy retained in the work originating document. If associated with a work package, retained in the work package. If associated with facility-approved procedures performed without a work package, facility retention until no longer needed, then retire to Records Holding Area (RHA) in accordance with RIDS.
Hazard Analysis Determination Criteria	PRC-PRO- WKM-079	Field Work Supervisor	Record copy retained in the work originating document. Electronic copy maintained in the Job Control System (JCS)
AJHA Feedback Summary Report	PRC-PRO- WKM-079	AJHA Administration	Original documentation retained in electronic database by AJHA Administration staff.
Radiological Records: Radiological Hazard Screening, ALARA Management Worksheet (AMW), A-6004-634, ALARA Reports, RWPs.	CHPRC- 00073 and radiological program implementing procedures, PRC-PRO- RP-40021, 40108, 40109	Facility/Project Designated Personnel - Qualified Radiological Work Planner	Original record to be retained by the Project/Activity Radiological Control organization. Copies of these records should be included in respective work documents for retention as part of that package when the Facility or Project sends them to Records Holding in accordance with RIDS.
NDA Records	PRC-RD-EN- 10484, Non- destructive Assay Management (NDA) Program	Facility/Project Designated Personnel	Facility retention until no longer needed, then retire to Records Holding in accordance with RIDS.
Environmental Records	PRC-PRO-EP- 15333	Facility/Project Designated Personnel	Facility retention until no longer needed, then retire to Records Holding in accordance with RIDS.
Arc Flash and Shock Hazard Analysis, A-6005-322	PRC-PRO- WKM-12115	Facility or Project	Retained in work package.
Asbestos Work Permit, A-6004-747	PRC-PRO- SH-15097	Responsible asbestos competent person	Retained in work package.
Bill of Material, link to or PRCMSS <u>eBOM</u>	PRC-PRO- AC-123	Facility or project	Copy retained in work package; original documentation retained in electronic database by PRC Procurement staff. http://prc.rl.gov/prcmss/working/index.c fm
Confined Space Entry Log, A-6004-726	PRC-RD-SH- 11258	Facility or project	Retained by Line Mgmt. at facility or project, copy in work package.

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Name of Document	Governing Procedure	Submittal Responsibility	Retention Responsibility
Confined Space Entry Permit, A-6004-724	PRC-RD-SH- 11258	Facility or project	Retained by Line Mgmt. at facility or project; copy in work package.
Electric Jumper Installation/Removal Record, A-6004-958	PRC-PRO- WKM-12115 (req'd @ PFP by 1-ZM-037 and 1-ZM-150)	Facility or project	Retained in work package.
Energized Electrical Work Permit, A-6004- 799	PRC-RD-SH- 11827	Facility or project	Retained in work package, copy sent to CHPRC Electrical Safety Program Coordinator.
Environmental Activity Screening (EASF), A- 6004-962	PRC-PRO-EP- 15333	Facility or Project ECO, or as designated per ECO memo.	Retained in work package or project file.
Pre-Job Briefing Checklist, A-6004-952	PRC-PRO- WKM-14047	Facility or project	Retained in work package.
Hanford Site Excavation Permit, A-6004-751	PRC-PRO- SH-090	Responsible Person, Facility/System Owner	Site Excavation Coordinator, and Facility Work Control Center Work package).
Hazard Review Board Meeting Record, A- 6004-513	PRC-PRO- WKM-40004	Facility or Project	Retained in work package
Hazard Review Board Action List, A-6004-580	PRC-PRO- WKM-40004	Facility or Project	Retained in work package
Hotwork Permit, A- 6004-725	HNF-RD-9900	Facility or project	Retained in work package/High Hazard cc: to Fire Marshal.
Lifted/Landed Lead Record, A-6004-960	PRC-PRO- WKM-12115	Facility or project	Retained in work package.
Modification Impact Review, A-6004-963	PRC-PRO- WKM-12115	Facility or project	Retained in work package.
Nonemergency Hydrant Tie-In Permit, A-6006- 681	HNF-RD-9717	Facility or project	Original to water purveyor/cc: work pkg.
Plant Forces Work Review, A-6004-530	PRC-PRO-IR- 070	Company Work Review Agent (CWRA)	Original retained by CWRA permanently IAW RIDS; Copy retained in work package
Pre-Demolition Checklist, A-6004-622	PRC-PRO- WKM-12115	Project or facility	Retained in work package
Pole Contact Permit, A-6002-899	HNF-PRO-479	Facility or project	Non-record.
SNFP Waste Planning Checklist, A-6003-587	WM-5-010	100K Area Project	Retained in work package.
Waste Planning Checklist, A-6004-590 (or other versions)	PRC-PRO- WKM-12115	Facility or project	Retained in work package unless waste handling information and instructions are transferred to the work instructions, in which case, it may be discarded if not OUO.
Work Package Engineering Cover Sheet, A-6005-105	PRC-PRO- EN-20050	Facility or project	Retained in work package.

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Name of Document	Governing Procedure	Submittal Responsibility	Retention Responsibility
Fabrication Request form	Fab Services Technical Support Desk Instructions	End- user/Requestor	None. (Results incorporated into Statement of Work)
Tagout Authorization TAF (A-7400-140)	DOE-0336	Initiator	Work package, minor work authorization, or Project records.
Eight Criteria Checklist (A-6003-801)	DOE-0336	Initiator	Work package, minor work authorization, or Project records.
Document Record Folder (DRF) Manila cover, 54-6000- 202 (01/92) Green accordion with tabs, 54-6000-801	PRC-PRO- WKM-12115	Facility or project	Retained in work package.
Signature/Initial Verification Log, A- 6003-003 Signature Continuation Sheet, A-6004-496	PRC-PRO- WKM-12115	Facility or project	Retained in work package.
Hazardous material shipping papers	PRC-PRO-TP- 156	Shippers	Shippers

6.0 REFERENCES

6.1 Requirements

10 CFR 830, Subpart A, General Definitions and Provisions

10 CFR 851, Worker Safety and Health Program

10 CFR 1021, National Environmental Policy Act Implementing Procedures

DOE O 210.2, Corporate Operating Experience Program

CRD O 226.1A (Supp Rev 0), Implementation of Department of Energy Oversight Policy

DOE O 414.1C, Quality Assurance

DOE O 430.1B, Real Property Asset Management

CRD O 433.1A, Maintenance Management Program for DOE Nuclear Facilities

CRD O 450.1A, Environmental Protection Program

ISO 14001:2004, International Standards Organization (E) International Standard, Environmental Management

DOE/RL-96-68, Hanford Analytical Services Quality Assurance Requirements Document

NFPA 70E, Standard for Electrical Safety in the Workplace

ASME NQA-1, Quality Assurance Requirements for Nuclear Facility Applications

DOE-HDBK-1028-2009, Human Performance Improvement Handbook

RRD-005 Rev 3, Worker Safety

Memorandum of Agreement for the Performance and Payment of Services between Mission Support Alliance, LLC, and CH2M Hill Plateau Remediation Company

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6.2 References

42 USC 9601-9675, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA),

DOE G 430.1-2, Implementation Guide For Surveillance And Maintenance During Facility Transition And Disposition

Davis-Bacon Act, 40 CFR 3141-3144, 3146, and 3147

DOE G 430.1-3, Deactivation Implementation Guide

DOE G 430.1-4, Decommissioning Implementation Guide

DOE G 430.1-5, Transition Implementation Guide

DOE-RL-92-36, Hanford Site Hoisting and Rigging Manual

DOE-0336, Hanford Site Lockout/Tagout

DOE-0342, Hanford Site Chronic Beryllium Disease Prevention Program (CBDPP)

CHPRC-00073, CH2M HILL Plateau Remediation Company Radiological Control Manual

HNF-11724, Fluor Hanford Safety Management Program

HNF-42884, CHPRC Welding Manual

MSC-RD-7899, Fire Protection System Testing / Inspection / Maintenance / Deficiencies

MSC-PRO-140, Utilizing General Supplies, Spare Parts, and Convenience Storage Inventories

PRC-GD-WKM-12116, Work Planning Guide

PRC-MP-CN-28049, Construction Procedure Manual

PRC-MP-MS-003, ISMS/EMS Description

PRC-MP-QA-599, Quality Assurance Program

PRC-PRAC-CN-30374. Construction Work Packages

PRC-PRO-AC-186, Statements of Work

PRC-PRO-AC-192, Buyer's Technical Representative Assignment and Duties

PRC-PRO-AC-123, Requesting Materials and Services

PRC-PRO-AC-28249, On-Site Material Deliveries

PRC-PRO-CN-8006, Construction Work Authorization Envelope

PRC-PRO-CN-14990, Construction Management

PRC-PRO-EM-060, Reporting Occurrences and Processing Operations Information,

PRC-PRO-EN-20050, CHPRC Engineering Configuration Management

PRC-PRO-EN-20051, CHPRC Engineering Selection, Qualification, and Training

PRC-PRO-EN-286, Testing of Equipment and Systems

PRC-PRO-EN-2001, Facility Modification Package Process

PRC-PRO-EP-15333, Environmental Protection Processes

PRC-PRO-IR-070. Plant Forces Work Review (Davis-Bacon Act Compliance)

PRC-PRO-IRM-184, Information Protection and Clearance

PRC-PRO-IRM-10588, Records Management Processes

PRC-PRO-MN-490, Calibration Management Program

PRC-PRO-MN-19304, Periodic Maintenance and Surveillance Process

PRC-PRO-MS-067, Managing Lessons Learned

PRC-PRO-NS-062, Unreviewed Safety Question Process

PRC-PRO-PM-24889, Project Initiation and Execution

PRC-PRO-PMT-144, Disposition of Excess Property

PRC-PRO-QA-259, Graded Approach

PRC-PRO-QA-5432, Hold Point Application in Technical Work Documents

PRC-PRO-RP-40021, Radiological Work Permits

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PRC-PRO-RP-40108, Radiological Hazard Screening

PRC-PRO-RP-40109. Radiological Hazard Controls for Medium and High Hazard Work

PRC-PRO-SH-31697, Controlling Exposures to Hexavalent Chromium

PRC-PRO-SH-32621, Closure Facilities hazards

PRC-PRO-SH-6155, Implementation of the Hanford Site Chronic Beryllium Disease Prevention Program

PRC-PRO-TP-156, Onsite Hazardous Material Shipments

PRC-PRO-TP-166, Transportation Safety Training

PRC-PRO-WKM-17132, Automated Job Hazard Analysis (AJHA) Process Guide

PRC-PRO-WKM-14047, Conducting Pre-Job Briefing and Post-Job Reviews

PRC-PRO-WKM-079, Job Hazard Analysis

PRC-PRO-WKM-40004, Hazard Review Board

PRC-RD-EP-15332, Environmental Protection Requirements

PRC-RD-EN-1819, Engineering Requirements

PRC-RD-EM-7647, Emergency Preparedness Program Requirements

PRC-RD-EN-10484, Nondestructive Assay Management (NDA) Program

PRC-RD-MN-10859, Maintenance Management

PRC-RD-PM-14988, Project Management Requirements

PRC-RD-SH-11258, Confined Spaces

PRC-RD-SH-12386, Subcontractor Safety and Health Management Requirements

PRC-RD-SH-24243, Portable Ladders

PRC-RD-WKM-8524, Supervision of Fieldwork

Hanford Fire Department Standard Operating Policy 4.3, Fire System Testing and Maintenance Program Plan. (HFD procedures have been endorsed by the PRC.)

PUBLIC LAW 100-605, Hanford Reach National Monument, Final Comprehensive Conservation Plan & EIS

DOE/EA-1112, Sludge and Solid Residue Stabilization at the Plutonium Finishing Plant

DOE/EIS-0119, Decommissioning of Eight Surplus Production Reactors at the Hanford Site, Richland Washington

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7.0 APPENDIXES

Appendix A -Symbol Logic for Process Maps

Appendix B - Glossary

Appendix C - Work Priority List

Appendix D - Use of "Working Copy" Documents

Appendix E - Minor Work Ticket /No Additional Planning Required

Appendix F - NEPA DOCUMENTS

Appendix G - Panelboard Modifications at the Plutonium Finishing Plant (PFP)

Appendix H - Statement of Work

Appendix I - Roles and Responsibilities of Critical Work Management Participants

Appendix J - Beryllium Suspect Buildings

Appendix K - D4: Deactivation, Decommissioning, Decontamination, and Demolition

Appendix L, Review and Approval of Work Management Documents

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Appendix A - Symbol Logic for Process Maps

Symbol Use Description The trapezoid shape is used to identify the starting Starting point for a process map. Starting points do not Point typically include actions or identify performing personnel. Process The rectangle shape is used to identify process steps Action on the process map. Decision The diamond shape is used to identify decision points Point on the process map. The ellipse shape is used to identify input data to the Input Data process map. Stop The hexagon shape is used to identify stopping points Point on the process map. The oval shape is used to identify end points on the process map. It can also be used as a linking point to End **Point** another process map. End and linking points do not typically have actions or identify performing personnel.

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Appendix B - Glossary

_	D # 14
Term	Definition
Acceptance Authority	The individual in an organization who has authority to accept the completed work package as satisfactory. For work activities this is usually someone in the Operations organization and the signature often documents the satisfactory performance of a retest of the work. Administrative packages (no field work was performed) may be signed by anyone given this authority by the facility management team, or marked as not applicable. Non-nuclear facilities may designate persons outside of Operations to perform this function.
Acceptance Criteria	Specified limits placed on the performance, results, or other characteristics of an item, process, or service defined in codes, standards, or other requirement documents. (From NQA-1-2008)
Activity	See Task.
Activity Level	This ISMS term includes review, authorization, and expectations to execute authorized work.
Administration Support	A general term for those employees who handle general administration tasks associated with work management.
AJHA	Automated Job Hazard Analysis. A documented process whereby a work activity is analyzed by a trained AJHA facilitator with input from Subject Matter Experts (SME), Craft Workers and Project Management for hazards and a set of safety controls defined to eliminate or mitigate those hazards prior to the work being performed. See PRC-PRO-WKM-079.
AJHA Coordinator	The AJHA Coordinator serves to facilitate the hazard identification and control portion of work planning. This position is supported by training and qualification. See Appendix I . See also PRC-PRO-WKM-079.
Approval	Official endorsement of the subject and content of a document. Approval is indicated by dated signature(s). See Appendix L . Some Projects and facilities impose additional review or approval requirements.
Area Work Review Agent	The individual assigned to a project or area that oversees the Plant Forces Work Review (PFWR) process for that project or area per PRC-PRO-IR-070, Plant Forces Work Review (Davis-Bacon Act Compliance) . Reviews and processes the PFWRs to the Company Work Review Agent (CWRA) for determination by DOE. Assists the CWRA with any questions or concerns relating to Davis-Bacon issues in his/her assigned area.
Building/Facility Owner	The individual(s) who have building responsibility and may declare building emergencies. This is typically a Building Emergency Director or Building Warden (non-nuclear facilities).
	The Owner also has certain responsibilities for all work that takes place at the respective project or facility. The owner establishes a safe work boundary prior to the release of any work. This is assured through job planning and safety review processes, such as the job safety analysis (JSA).

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Appendix B – (Cont.)

Building/Facility Owner (cont.)

The plant or system owner identifies items or systems to be removed or demolished by a subcontractor or sub-tier contractor. Such items or systems identified conspicuously by paint, flagging, marking, etc., to the mutual satisfaction of the subcontractor and the owner prior to removal or demolition.

Supplying organizations must use job planning, review, and release methods to ensure that the owner's representative is aware of a subcontractor worker's presence and work scope. The methods must define the work scope and ensure that safe boundaries are established prior to releasing the work.

See also Owner.

Buyer Technical Representative, BTR The BTR is the person authorized to prepare a task order, contract, or other statement of work, followed by monitoring the contractors progress by interfacing with the facility owner.. See PRC-PRO-AC-192, and PRC-PRO-AC-186 for more details.

CHPRC-Performed Construction CHPRC Construction activities that are performed by Engineering, Procurement and Construction (EPC) and are termed "CHPRC-performed construction", or sometimes, "self-performed construction." This is in contrast to contracted work that is performed per a Statement of Work by a subcontractor. Work in this category is performed in accordance with PRC-PRO-WKM-12115 as outlined in a CWAE or MOU. See PRC-PRO-CN-14990 for details.

Closure Facility Hazard

A workplace hazard within a closure facility covered by a requirement of rule section 851.23 for which strict technical compliance would require costly and extensive structural / engineering modifications to be in compliance. Notification to DOE may be required when a new closure facility hazard cannot be corrected within 90 days. See PRC-PRO-SH-32621.

Cold and Dark

A building or facility where all hazardous materials have been removed, and the electrical and mechanical sources of hazardous energy have been eliminated. This is usually accomplished by creating an "air gap" between the source of the energy and the building or other bounded physical location. See Appendix K.

Computerized Maintenance Management System (CMMS) The computer software tools used to support the work management process. These tools typically track work packages, as well as periodic maintenance activities and component data bases and have a wide spectrum of capabilities. CHPRC uses JCS, the Job Control System for this function.

Configuration Management

The process that controls the activities, and interfaces, among design, construction, procurement, training, licensing, operations, and maintenance to ensure that the configuration of the facility is established, approved, and maintained. (from NQA-1-2008)

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Construction Manager (CM) The Construction Manager is the person in the Job-Site Supervisory role with the capacity to direct construction crews performing all types of construction activities.

Authorization

Construction Work The purpose of a project specific CWAE agreement is to serve as a memorandum of understanding, or organizational interface agreement Envelope (CWAE) between the performing organization (e.g., construction or subcontractor) and the project or facility that maintains responsibility for the footprint where the work will be performed. See PRC-PRO-CN-8006.

Quality Control Package (QCP) The QCP is the vehicle for ensuring that all inspection and quality control activities are performed appropriately during the course of construction, that the activities are appropriately documented and that the resulting documents are effectively and efficiently generated, collected, reviewed and verified prior to turnover to the client. The QCP is used to collect qualityrelated documentation, but will not be used to manage the flow of physical construction work, or manage work sequencing within a definable feature of work. QCPs are generated and controlled per PRC-PRAC-CN-30374, Quality Control Packages. For comparison, also see Construction Work Package (CWP).

Package (CWP)

Construction Work The Construction Work Package is the term used to describe the entire bundle of documents that supports and describes a given Construction work activity. The work package contains work instructions, permits and forms, AJHA or JSA, and/or JCS paperwork, etc. The bundle or package is usually contained within the Document Record Folder, or similar binder that provides a means of keeping the paperwork together and in order, allows for project identification on the outside, and may provide for routing information. Upon completion, the work package becomes a record and is retained either in paper form or in an appropriate electronic format per company RIDS.

> Although a work package developed by this procedure may exist to perform construction, a Quality Control Package (QCP) is a completely different document that exists for documentation of construction for QA records. For comparison, see QC Package.

Corrective

Work tasks that repair failed or malfunctioning equipment, systems, or Maintenance (CM) facilities to restore the intended function or design condition.

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Critical Step

A procedure step, series of steps or action that, if performed improperly, will cause irreversible harm to equipment, people, or the environment. A primary goal of the worker is to retain positive control at critical steps when error-free performance is essential for safety (From DOE handbook 1028-2009).

Not all aspects of a job are equally important. Some actions/tasks are irrecoverable, which means once the action is taken, the reverse action cannot undo the action. Some steps have more chances for error so questions should be asked before commencing, such as, is changing the state of the facility, system, or component or well-being of the individual dependent on the individual worker? Or, is the outcome of the error intolerable from a personnel safety or facility perspective?

The concept of the critical task helps focus attention on potential consequences so that:

- Appropriate defenses and contingencies can be planned into the work instructions.
- The work crew can look for error precursors that could impact the job at that given time and place.

Deactivate

The process of placing a facility in a stable and known condition including the removal of hazardous and radioactive materials to ensure adequate protection of the worker, public health and safety, and the environment, thereby limiting the long-term cost of surveillance and maintenance. Actions include the removal of fuel, draining and/or de-energizing nonessential systems, removal of stored radioactive and hazardous materials, and related actions. Deactivation does not include all decontamination necessary for the dismantlement and demolition phase of decommissioning (e.g., removal of contamination remaining in the fixed structures and equipment after deactivation). Source: DOE G 430.1-3, Deactivation Implementation Guide. See Appendix K.

Deactivation

The process of placing a building, portion of a building, structure, system, or component (as used in the rest of this paragraph, "building") in a safe and stable condition to minimize the long-term cost of a surveillance and maintenance program in a manner that is protective of workers, the public, and the environment.

The process of placing a facility in a stable and known condition, including the removal of hazardous and radioactive materials. (10 CFR 830 App. A to Subpart B of Part 830, E.5 Table 3)

See Appendix K.

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Deactivation Boundary A boundary between an operating facility or a source of hazardous energy and SSCs that are undergoing deactivation. The boundary must be permanent; it could be a pulled fuse block, disabled breaker, lifted electrical lead, blocked valve, blind flange, etc., which isolates a deactivated system or deactivated portions of a system from an operable or available system.

Decommission

To remove a nuclear facility or site safely from service and reduce residual radioactivity to levels that permit release of the facility or site for unrestricted use and termination of any applicable license. (NQA-1-2008)

Decommissioning

For those buildings, portions of buildings, structures, systems or components in which deactivation occurs, all activities that occur after the deactivation.

Those actions taking place after deactivation of a nuclear facility to retire it from service and includes surveillance and maintenance, decontamination, and/or dismantlement. (10CFR830 App. A to Subpart B of Part 830, E.5 Table 3)

The decision to decommission a DOE facility may result from discovery of a release or substantial threat of release of hazardous substances at the facility, or may simply be a programmatic decision to go forward with decommissioning.

See Appendix K.

Decontamination

The reduction or removal of radioactive contamination from a structure, area, object, or person. (NQA-1 – 2008).

Release criteria: the maximum radiation dose rate level and radioactive contamination level that are acceptable following decommissioning for unrestricted release of the facility or site being decommissioned.

Decontamination removes or eliminates hazards that are not permitted to be part of the building waste after demolition, such as refrigerants, oils, batteries, PCB ballasts, asbestos, mercury switches and hazardous chemicals.

The removal or reduction of radioactive or hazardous contamination from facilities, equipment or soils by washing, heating, chemical or electrochemical action, mechanical cleaning or other techniques to achieve a cleaner stated objective or end condition.

Decontamination - The removal or reduction of residual radioactive and hazardous materials by mechanical, chemical, or other techniques to achieve a stated objective or end condition. (10CFR830 App. A to Subpart B of Part 830, E.5 Table 3)

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Demolition SSCs identified by the plant or system owner to be removed, dismantled or

demolished. Demolition takes place after deactivation and

decontamination during the decommissioning process. See Appendix K.

Design Authority (DA)

An Engineer qualified and assigned as the responsible Design Authority by

management. Roles and responsibilities for the DA can be found in

PRC-PRO-EN-20051 and PRC-PRO-EN-1819.

The organization having the responsibility and authority for approving the design bases, the configuration, and changes thereto. (NQA-1 - 2008)

See also Technical Authority, and Appendix I, Roles and Responsibilities

Designated Leader A qualified individual assigned to all hoisting and rigging operations to

ensure that the lifting operation is properly performed. DOE-RL-92-36,

Hoisting and Rigging Manual

Direct Change A direct change is a change that does not meet the requirements of an

editorial change and requires reviews appropriate to the proposed change. A direct change shall not be used for work scope changes or removal of previously evaluated hazard/controls. Its purpose is to allow work

instruction changes with minimal impact to fieldwork in progress. If the work instructions become confusing due to size or number of changes required, a formal change should be processed. This change requires review and approval per Appendix L, and PRC-PRO-NS-062 applies to direct changes at hazard category 2 or 3 nuclear facilities and for Transportation &

Packaging involving >A2 quantities of radioactive material. See step 3.3.2.6

in this procedure for more details.

Editorial Change An editorial change is a change that meets the restrictions described in

PRC-PRO-MS-589 for content and is implemented as a handwritten change (deletion/addition) made by the FWS or Support Staff in the field using permanent (not water-soluble) ink. See also Pen and Ink Change.

Editorial changes to the work instructions are subject to PRC-PRO-NS-062

at hazard category 2 or 3 nuclear facilities or for Transportation &

Packaging that involves >A2 quantities of radioactive material. (See Work Instructions).

Pen and Ink changes are allowed for charge codes, resource and priority codes, and other fields on the work document that are not part of nor affect the work instructions.

See this procedure, step 3.3.2.4 for details.

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Emergency

Emergency work requires immediate action to prevent serious personnel injury, environmental harm, security breaches, or property loss, and typically involves Maintenance, Construction or Operations. Thus "emergency work" deals with emergencies and recovery from emergencies not classified as emergency responses.

Only initial stabilization of the emergency condition is allowed prior to processing a WD. In some cases, the critical issue may be mitigated by activating alternate mechanisms to accomplish the critical function rather than initiate a repair. When the alternate mechanism is in place, the work activity can usually proceed by processing a WD. The priority of such a WD would be applied in accordance with the guidance in Appendix C.

Emergent Work

Work tasks that are newly identified after the POW has been issued as necessary to be accomplished during the period covered by the POW

Environment

Surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans, and their interrelation.

Environmental Aspect

Element of an organization's activities or products or services that can interact with the environment. CHPRC evaluates work requests for potential environmental aspects and impacts by implementing PRC-PRO-WKM-12115, Work Management processes. Each work request is evaluated for interactions with the environment which leads to the identification of environmental aspects and impacts. Environmental Compliance Officers (ECOs) are required to review and sign-off on each AJHA and EASF. During this review the ECO evaluates the work activity against the project specific Environmental Aspects and Impacts Worksheet and identify appropriate updates or revisions.

Environmental Compliance Officer (ECO) The individual assigned in a project to make decisions related to environmental compliance issues.

Environmental Management System (EMS) Part of an organization's management system used to develop and implement its environmental policy and manage its environmental aspects. EMS encompasses the requirements of the CRD for DOE O 450.1A, Environmental Protection Program, to incorporate an EMS into the ISMS. The CHPRC EMS Core Elements are derived from International Standards Organization (ISO) 14001:2004 (E) International Standard, Environmental Management, and align with the ISMS Core Functions. EMS contributes to a systematic and structured approach to integrating environment, safety and health (ES&H) requirements into work planning and execution.

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Environmental Objectives and Targets

Objectives and targets are an inherent component of the Environmental Management System (EMS) and are established and implemented at the CHPRC project level. CHPRC will endeavor to have at least one active target for each project area, as well as one target on a CHPRC-wide basis.

Environmental objective: Overall environmental goal, consistent with the environmental policy that an organization sets itself to achieve.

Environmental target: Detailed performance requirement, applicable to the organization or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.

Field Work

Field Work is defined as a work activity performed on site within the scope of the CHPRC excluding administrative office activities or work performed to approved operating documents (e.g., radiation protection, and Operations).

Field work includes repair, replacement or alteration of physical assets or property including rental and other portable powered equipment performed in CHPRC controlled nuclear and non-nuclear facilities and equipment, shop fabrication, environmental restoration (ER), and deactivation and decommissioning (D&D or D4) work.

Field Work Complete (FWC) The status of a work package when all defined tasks are completed and the FWS has confirmed this with his/her signature. For administrative WDs, the FWC block would normally be N/A.

Field Work Supervisor (FWS) A trained and qualified individual assigned responsibility for coordinating, directing, and monitoring the performance of work in accordance with PRC-RD-WKM-8524, and this document, as well as interface for construction or contracted work activities, as assigned by the Construction Manager, or facility.

Fire Systems Maintenance (FSM) The section of the Hanford Fire Department (HFD) that is responsible for the proper maintenance and repair of the site fixed fire alarms, fire suppression systems and equipment, and water distribution systems.

Fire Protection Systems Testing and Logistics The section of the HFD that is responsible for control and testing of the site fixed fire alarms, fire suppression systems and equipment, and water distribution systems. Also known as Testing and Services (T&S).

Formal Change

A formal change is documented and approved on a formal work change notice (WCN). The formal change process shall be used for complex changes such as work scope changes, incorporation of new hazards or removal of previously evaluated hazard/controls, at a minimum. This will allow for appropriate review and approval of changes not previously evaluated by the work package development team. The formal change process is the most rigorous change process, utilizes JCS software tool, and may be used for any work package change. Review and approvals are per Appendix L. See step 3.3.2.8 in this procedure for more details.

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Graded Approach

The purpose of grading is to select the controls and verifications to be applied to various items and activities consistent with their importance to safety, environment, cost, schedule and success of the program. The CHPRC graded approach is integrated into work management by defining work document styles, and utilizing levels of rigor and detail for planned work instructions that are appropriate to the prescribed tasks.

See PRC-PRO-QA-259, Graded Approach.

Hazard

A source of danger (i.e., material, energy source, or operation) with the potential to cause illness, injury, or death to personnel or damage to a facility or to the environment (without regard to the likelihood or credibility of accident scenarios or consequence mitigation).

Hazard Controls

Measures to eliminate, limit, or mitigate hazards to workers, the public, or the environment, including: (1) physical, design, structural, and engineering features; (2) safety structures, systems, and components; (3) safety management programs; (4) technical safety requirements; and (5) other controls necessary to provide adequate protection from hazards.

Hazard Review Board (HRB)

The HRB process provides a method of selecting work activities for review by a management team to ensure that the appropriate safety measures have been implemented. See PRC-PRO-WKM-40004.

Human Performance Improvement (HPI) Human Performance Improvement is fundamentally about reducing errors and managing defenses. Striving for excellence in human performance is an ongoing effort to reduce events caused by human error. Human error is caused by a variety of conditions related to individual behavior, management and leadership practices, and organizational processes and values. Behaviors at all levels need alignment to improve individual performance, reduce errors and prevent events. Alignment involves facilitating organizational processes and values to support desired behaviors.

Integrated Safety Management System (ISMS) A system that integrate environment, safety, and health into the work planning and execution for the Project Hanford Management Contract scope of work. The overall objective is to "DO WORK SAFELY" while ensuring protection of workers, the public, and the environment. This system description is consistent with U.S. Department of Energy policy and the DOE Acquisition Regulation requirements for integration of environment, safety, and health into work planning and execution, and compliance with laws, regulations, and DOE directives contained within the PRC.

Job

A term generally used interchangeably with the term "work package" indicating a scope of work that has been defined in a given work document. However, the term is sometimes used interchangeably with "activity", "work activity" or "task." See Task.

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Line Management Any management level within the line organization, including contractor

management that is responsible and accountable for directing and

conducting work.

Measuring and Test Equipment (M&TE)

All tools, gauges, instruments, devices, or systems used to inspect, test, measure, calibrate, or troubleshoot to control or acquire data to specified

requirements. See PRC-PRO-EN-286 and PRC-PRO-MN-490.

Devices or systems used to calibrate, measure, gage, test, or inspect in

order to control or acquire data to verify conformance to specified

requirements. (NQA-1 - 2008)

(MWT)

Minor Work Ticket A simple, WD for performing pre-approved, routine tasks where there is low

hazard and low potential for changes. MWTs have been determined to be

record material in accordance with PRC-PRO-IRM-10588.

See Appendix E and Site Form A-6004-645.

Modification **Impact**

Used as a means of ensuring each modification to a project or facility is

carefully reviewed for any changes, training, spare parts, or other changes

are required resulting from the modification. The MIR provides a Review (MIR)

mechanism to ensure that the processes and programs that interface with the equipment that was modified are in a state or condition to support full use of the equipment when the physical changes have been completed. The JCS form or the MIR site form, (A-6004-963), is used to document

results of the review and track items to closure.

Modifications Work tasks that change the design configuration of the physical asset being

maintained as defined in PRC-PRO-EN-2001 or PRC-PRO-EN-20050.

Uses of like-for-like or equivalent items or temporary changes for

performing routine repairs are NOT modifications. See also, Temporary

Change.

NEPA Trained Individual

Individual who has met the requirements in PRC-PRO-EP-15333 for

conducting NEPA screens on work packages. NEPA is the National

Environmental Policy Act.

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No Additional Planning Required (NPR)

A simple WD for performing pre-approved tasks where tracking is required, or Periodic Maintenance tasks where no supplemental work instructions are required beyond those contained in the pre-approved technical procedure or datasheet. The concept is that the planning is minimal and has already taken place for this activity by virtue of the criteria provided in Appendix E.

Any pre-approved procedure may be placed into a NPR WD, which is then used as the vehicle to have the work scheduled and released. Procedures for work activities work that have been determined to be beyond skill-based are allowed on NPR because the planning and hazards analysis have already been formally conducted and captured within the approved procedure.

Some facilities refer to work that meets the criteria for NPR by other names that were coined at that facility.

No Release Required (NRR) A designation given to activities that do not affect the operation and configuration of the facility and do not require Release Authority approval prior to performing the work. The Release Authority or his delegate concurs that formal release is not required when signing the pre-work review.

Owner

The organization legally responsible for the construction or operation of a DOE facility, or in possession of an abandoned facility in the Deactivation and Decommissioning process.

In the area of contracted work, the owner is the responsible project manager for the location where the work will take place, or his representative.

For nuclear facilities: The organization legally responsible for the construction and/or operation of a nuclear facility including but not limited to one who has applied for, or who has been granted, a construction permit or operating license by the regulatory authority having lawful jurisdiction. (NQA-1 – 2008)

Partial Work Release The act of authorizing personnel to accomplish a defined portion of the work instructions. The RA must authorize and accept each section of the work.

Pen and Ink Change A pen and ink change is a method used to implement some authorized changes as described in <u>Section 3.3.2</u> of this procedure. A Pen and Ink Change is written by hand using permanent ink. To make this type of change, cross out the information to be deleted or changed with a single line, print in any new information and initial and date the change. Changes to the work instructions or retest require DA approval and fall under PRC-PRO-NS-062. This type of change implementation is used for Editorial Change and for Direct Change.

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Periodic Maintenance (PM)

Work tasks that perform periodic maintenance activities intended to maintain a system or component in the as-designed condition without the need for unplanned Corrective Maintenance. Types of tasks that fall into this category typically include preventive maintenance, instrument calibrations, and surveillance testing of safety or safety basis systems and equipment.

Person-in-Charge (PIC)

Formerly, an individual with extensive training of facility-specific requirements that applies to overseeing work in that facility. This term is now used equally with that of Fieldwork Supervisor (FWS). The FWS must have the qualifications necessary for the location where the work will occur. The See FWS in this appendix.

Plan of the Day (POD)

The listing of activities that are planned for accomplishment on a given day. The POD may be a subset of the POW.

Plan of the Week (POW)

The listing of activities and/or work packages that are scheduled to be worked during a given week. The POW becomes the basis for resource allocation and integration of work tasks at a given project or facility.

Planned Work Instructions

A set of Continuous Use instructions developed to accomplish a task. Planned work instructions may be used for any work, but are usually reserved for work that is beyond skill-based and/or requires sequential instructions to be performed correctly. This task could be a modification, complex corrective maintenance, supplemental work instructions to support a PM task, or deactivation and decommissioning activities, using a graded approach for detail and content. See also Work Document and Work Instructions.

Planner (Work Planner)

A general term for those employees who are assigned to put work elements into work instructions, and have responsibility for work package process, content, accuracy and completeness. This position is supported by training and qualification. The function of planner may be performed by persons in any job description (operator, engineer, technical authority), but all planned work instructions must be written or approved by an individual who has completed the qualification program per course 170723, documented on site form A-6005-183. See Appendix I and the Training Program Description.

PM Coordinator

The individual in an organization who has the responsibility to use PM recall systems to generate PM work packages. This position is supported by training. See Appendix I.

Post-Job Review

The process of reviewing completed work activities to identify strengths and needed improvements as outlined in PRC-PRO-WKM-14047 and CHPRC-00073.

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Pre-Approved Document

A document that has been developed and approved by a defined process. These documents may be packaged in the WD to accomplish the work. Examples are: Periodic Maintenance Procedures, Operations Surveillance or Operating Procedures, and Critical Lift Plans.

Pre-Job Briefing (PJB)

The pre-job briefing is conducted by the FWS with the team who will be performing the work identified in the WD as outlined in PRC-PRO-WKM-14047 and CHPRC-00073.

Pre-Job Walkdown This is a walkdown that typically occurs as part of the pre-job briefing, where the work team and FWS and SMEs (as needed) walk the job site together to confirm a common understanding of the work to be performed, verify that the conditions at the work site are as described in the work instructions and pre-job briefing, and to identify any hazards at the work site that had not been identified or analyzed as part of the job hazard analysis.

Prerequisites

Prerequisites and initial conditions should be detailed. This is a section of the work instructions; only those steps that are required to be performed by the Operations group must be completed prior to work release. Other activities performed by the work team should also be listed in this section.

The steps should be grouped by who is responsible to perform them to make it clear which steps must be completed prior to the work release authorization. Operations' responsibilities typically include activities such as equipment line-up, configuration control, installation of LOTO, notifications to off-site organizations or administrative issues related to the Safety Basis.

Activities that must be performed by the work team prior to beginning a task should be grouped separately. The FWS is responsible to ensure these steps are performed. They typically include staging of equipment, building scaffolding, etc.

Pre-Work Review

The act of performing a final review of the work package to determine if the paperwork is acceptable to the Release Authority and ready to be scheduled for field work. Requirements for this review are found in step 3.2.3.32 of this procedure.

For safety and protection of the facility, this review may occur any time before work release, but for efficient scheduling, the review should be performed at least several days in advance of the proposed release date to allow time for correcting and any deficiencies without perturbation of the schedule.

For field work this review is performed by a Release Authority or designee. For administrative WDs, this review may be marked N/A, or performed by individuals assigned by facility management.

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Priority

A value code that is assigned to a work package to designate the relative urgency of the task in relation to other work tasks considering safety, facility mission, statutory requirements, etc. See Hanford Fire Department Standard Operating Policy 4.3, Fire System Testing and Maintenance Program Plan for priorities involving fire protection systems, and Appendix C of this procedure.

Radiological Hazard Determination (Screening)

The application of the graded approach during planning for radiological work activities, in accordance with the requirements of PRC-PRO-RP-40108, Radiological Hazard Screening. Initial determination of Radiological Hazard is based upon unmitigated hazards. Radiological Hazard work screening should be reviewed or revised whenever an AJHA is reviewed or revised, or when radiological conditions have changed in the vicinity of the work activity per PRC-PRO-RP-40108. Radiological hazard determinations may be documented using Site Form A-6004-654, or in the facility AJHA module (if the content is approved as containing equivalent information).

Radiological Work See the Glossary in CHPRC-00073, CH2M Hill Plateau Remediation Company Radiological Control Manual.

Planner

Radiological Work A member of the Radiological Control Organization who has completed training and qualification as described in CHPRC-00073, Article 653. This person assists the Planner during preparation of work instructions for radiological work.

Release Authority

The individual at a facility or project who has been designated by management as having the authority to release the work package for work in the field. This individual is normally part of the Operations organization or other group corresponding to the Controlling Organization noted in DOE-0336. This individual is responsible for configuration control at his/her respective facility. The release process is described in Section 3.2.5 of this procedure. See appendix I for RA roles and responsibilities.

Repair

The process of restoring a nonconforming characteristic to a condition such that the capability of an item to function reliably and safely is unimpaired, even though that item still does not conform to the original requirement. (NQA-1 - 2008)

Requestor

The individual identifying a work task. See also, Sponsor.

Resolution

A term that originally referred to resolving a problem, such as in corrective maintenance (CM). The more modern term is "work instructions," which properly denotes instructions to perform any kind of work, not just CM. See Work Instructions.

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Restoration

The steps required to return a system or component to its normal operating status after work has been performed. This could involve clearing the LOTO, equipment line-up, exit from an LCO condition, etc. The term "environmental restoration" falls under CERCLA and is not applicable to this context.

Restoration and Testing is a section of the work instructions that describes what steps are required to restore the SSC to operability. For major modifications or new installations, the Testing section could involve rigorous configuration changes and data collection as designated by the Design Engineer. See Retest and Testing

Retest

A retest is performed following field work such as corrective maintenance or preventive maintenance to determine whether the work was successful, if the equipment was restored correctly, and confirms that it is capable of meeting the design, surveillance or operational requirements. If work activities were added per change notices, the retest requirements should be re-evaluated to ensure they are adequate. See PRC-PRO-EN-286, for additional information.

Scheduler

A general term for those employees involved in developing the POD/POW.

Scope

The scope of work instructions defines the work that is to be accomplished by the instructions that follow. It describes the intention and extent of the work activity. An ISMS core function, defining the scope is critical to be able to correctly and thoroughly identify the hazards associated with the work and select appropriate controls. The scope should address the problem description and the defined end-state to be accomplished, and state any planning boundaries or assumptions related to Environmental, Safety and Health. See step:3.2.3.14 and following for more details.

Shopwork

The performance of fabrication, calibration, PM, or repair in the craft shops that support the facility. Shop work does not require release by Operations.

Signature Log

A signature log is one means of complying with the requirement to maintain complete records in accordance with PRC-PRO-IRM-10588, Records Management Process. Complete records include validation or authentication signatures. These signatures must be legible, or be able to be tracked to the person who has signed. This has been interpreted as meaning that the name must also be printed next to the signature. A signature log can be used to connect the signature to a name. The log may be maintained for a facility or for each individual work package or in some other way that meets the records needs of the organization. Site Forms are available, if desired. See Section 4.0.

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(SOW)

Statement of Work A Statement of Work (SOW) provides a description of the work to be performed under a given Contract, and includes various items such as a written narrative of background, detailed description of the SOW, schedule requirements, and environmental, safety, and health and quality requirements. The BTR is the liaison between the Contractor and the Facility. See PRC-PRO-AC-186.

Subject Matter Expert (SME)

An individual who by appropriate education, training and/or expertise is a recognized expert in a particular subject, topic, discipline or system, and is identified and authorized to represent an organization or functional area for a specific topic or set of topics. SME may be called upon to review or approve planned work instructions, AJHAs, and similar technical documents, but they are not required to be qualified work planners. See also Appendices I and L.

Supplemental Work Instructions

Instructions in a WD that are used to sequence or provide additional steps when pre-approved documents will be used, but do not address special conditions, configuration, recovery, etc. Supplemental work instructions require review and approval per Appendix L.

Supplying Organization The organization that comes into the owner's facility/area to perform work. often referred to as contractor or sub-contractor.

Support Staff

Support staff is a generic term used to identify either a Planner or Work Control staff assigned responsibility for conduct of a post job review or other administrative functions within the work management process.

Surveillance

Observation only of parameters for the purpose of confirming operation or condition within specified limits. This term is often used for operator rounds. For comparison also see Surveillance Testing, and Surveillance and Maintenance.

Surveillance and Maintenance (S&M)

During a facility's active life, S&M refers to monitoring, testing and repair activities to ensure that the facility performs its design functions. When a facility is not longer useful to DOE, it enters the various phases of D4 (see Appendix K). S&M in D4 refers to the monitoring and repairs that must continue between Deactivation and Demolition.

Surveillance and maintenance plans are developed for facilities and land parcels with residual contamination, hazards, or other conditions that are projected to require post disposition Long-Term Stewardship (LTS). These plans must identify appropriate management and funding requirements to ensure safety, health, and environmental regulatory compliance and meet relevant requirements of treaties, agreements, or other DOE commitments.

For comparison also see Surveillance and Surveillance Testing.

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Surveillance Testing Performance of invasive proceduralized activities designed to inspect structural conditions, or test and confirm that equipment and systems are operating within specified limits. The specified limits are typically related to regulatory requirements such as nuclear safety, fire protection, environmental compliance, etc. For comparison also see Surveillance, and Surveillance and Maintenance.

Suspect/ counterfeit items (S/CI) An item is suspect when inspection or testing indicates that it may not conform to established government or industry-accepted specifications or national consensus standards or whose documentation, appearance, performance, material, or other characteristics may have been misrepresented by the supplier or manufacturer. A counterfeit item is one that has been copied or substituted without legal right or authority or whose material, performance, or characteristics have been misrepresented by the supplier or manufacturer. Source: DOE O 414.1C, Quality Assurance, Section 7, Definitions, part r; 10 CFR 830.120, Quality Assurance Requirements.

The requirements for detecting, identifying, reporting, evaluating, and dispositioning suspect/counterfeit items (S/CI) that may be installed in structures, systems, and components (SSCs) with Safety Applications come from DOE Order 414.1C, Quality Assurance, Contractor Requirements Document (Attachment 2), Section 4.b, "Work Process Controls."

See PRC-PRO-QA-301 for more details.

Task

Task is a term used interchangeably with the terms "job" and "work activity." It can be used to describe the scope of an entire work package, or a discrete step within that work package. The term is used in the AJHA software to break a larger job into smaller steps so that the hazards can be adequately identified and analyzed. The work instructions often identify the sections to correlate with the AJHA task identification.

ISMS is to be implemented at the activity level. It is this concept that is being conveyed by the use of these terms.

Task Charge Authorization (TCA) The primary document which defines and controls the performance obligations of the CM as well as identifying the performance obligations and work controls implemented by CH2M HILL Plateau Remediation Company (CHPRC) EPC organization.

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Technical Authority (TA)

The individual, designated by Function/Project Owner, with the necessary training and experience to provide technical responsibilities for various functions and activities within the work management process. In most cases, the Design Authority holds the responsibility for these functions, but a designated TA may perform them when authorized by the project or facility.

Persons who typically fulfill this role other than the DA could be, but are not limited to, Responsible Engineer, Cognizant Engineer, System Engineer, Fire Systems Maintenance (FSM) Engineer and Fire Protection Engineer, facility waste engineer, process specialist, manager, etc.

See also, Design Authority, and <u>Appendix I</u>, Roles and Responsibilities for more information.

Temporary Change

A temporary change (sometimes incorrectly called a temporary modification) is a change to a system that :

- a. places the system in a non normal configuration for a specified short term duration,
- b. is controlled by a JCS work package,
- c. has the duration of the temporary change specified in the JCS Work Package,
- d. returns the system back to its original configuration prior to normal operations,
- e. is concurred with by the Operations Manager and Project Chief Engineer.

Because the temporary change meets the above criteria it is not considered a modification. JCS Work Packages with Temporary Changes shall not be closed or suspended until the system is returned to its normal configuration, and must remain on the Daily Release Sheet and/or Plan of the Day until closed.

Testing

An element of verification for the determination of the capability of an item to meet specified requirements by subjecting the item to a set of physical, chemical, environmental, or operating conditions. (NQA-1-2008)

Testing and troubleshooting are limited to those actions necessary to measure voltage and current and to verify the operability of equipment without repairing or replacing components. See also Restoration.

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Troubleshooting

The plan and activities used to check various parameters in order to determine the cause of a problem when the exact cause of a problem is not known. Troubleshooting can be invasive (requires a written plan that includes steps, expected outcomes and decision points) or non-invasive (normal diagnostic checks).

Testing and troubleshooting are limited to those actions necessary to measure voltage and current and to verify the operability of equipment without repairing or replacing components.

For additional guidance, see PRC-GD-WKM-12116 Appendix G. Troubleshooting Process Guidance, and Appendix D, the entries labeled Troubleshooting and Electrical Jumper and Wire Installation/Removal for Testing/Troubleshooting.

Validation Authority

The individual or position designated by facility or project management as having the responsibility and authority to validate work requests, that is, to determine if they should be pursued further in the work management process or rejected.

Workability Review Something is workable if it is capable of being put into practice or of being accomplished. It is feasible or possible. A workability review of the work instructions is conducted by members of the work team, typically the FWS and one or more workers. The goal is for individuals who will actually perform the work to be given the opportunity to review the instructions and identify any obvious flaws or worthwhile improvements that would make the job safer or more efficient. The point of this review is for the workers to determine from their perspective if the work instruction are clear, technically correct, safe and reasonably efficient, For safety, this could be done any time prior to the start of the work. For efficiency, this should occur before the work instructions have been scheduled so that any needed changes can be made to the work instructions before workers have been assigned. See also Pre-Job Walkdown and Workability Walkdown.

Workability Walkdown

The work team walks down the job with the approved work instructions in hand to confirm that they fully understand the scope of the job and that it can be performed in the field as written. This could be done in advance of the work document being released for work, but is normally done as a prejob walkdown.

Work Acceptance

The act of accepting that the work performed in the WD was satisfactory. This is done by the Acceptance Authority, which see.

Work Closeout

The process of completing all activities in a WD after Work Acceptance so the work package may be archived.

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Work Document (WD)

The WD consists of the JCS paperwork that accompanies or encloses the work instructions. The work instructions tell you how to do the work; the WD includes a variety of information about the work such as the problem description, the component and system numbers and locations, etc. The WD may contain approvals, references, resource requirements, and other pertinent information that supports the work instructions. The work instructions may be thought of as a subset of the WD. The WD and supporting documentation (AJHA, RWP, FMP, permits, etc.) is assembled into a work package. Upon completion, the WD becomes part of the work package record and is retained either in paper form or in an appropriate electronic format per company RIDS.

Work Initiation

The act of identifying a work task that will be processed through the work management system.

Work Instructions (WI)

The work instructions specify the actual work that will be conducted in the field including, from statement of scope through restoration and retest. The work instruction is the "activity" part of a work package to which PRC-PRO-NS-062 (USQ), applies, and changes to the work instructions must be performed and documented. Work instructions may be preapproved or original. Preventive maintenance and surveillance testing is usually done to pre-approved instructions (procedures or data sheets). Corrective maintenance, modifications, and D&D work are normally performed according to original work instructions. See PRC-GD-WKM-12116. Planned work instructions must be generated by or approved by a qualified work planner who has completed course #170723. See Work Steps, Planned Work Instructions, Work Document and Work Package for comparison.

Representative (WMR)

Work Management A subject matter expert of the Work Management process, assigned by the CHPRC Work Management Technical Authority. This person serves to assist anyone in regard to the work management process, but in particular works with BTRs in determining work control specifics to be included in a SOW. See Appendix H. See PRC-PRO-AC-192.

Work Order (WO)

The document that provides the direction on how to resolve the task in the Work Request. This term is often used instead of the more specific terms work package, work document or work instructions.

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Work Package

The work package is the term used to describe the entire bundle of documents that supports and describes a given work activity. The work package contains work instructions, permits and forms, AJHA, CMMS paperwork (JCS, MAXIMO, CHAMPS, etc.), and so on. The bundle or package is usually contained within the Document Record Folder, or similar cover that provides a means of keeping the paperwork together and in order, allows for identifying marks on the outside, and may provide for routing information. Upon completion, the work package becomes a record and is retained either in paper form or in an appropriate electronic format per company RIDS.

Although a work package developed by this procedure may exist to perform construction, a Construction Work Package is a completely different document that exists for documentation of construction for QA records. For comparison, see Construction Work Package.

Work Record

The part of the WD where narrative entries are made by workers and FWS. These entries would include documentation of changes made to the Work Package, Notice of Discrepancies (NODs), FWS turnover, issues or problems during the work, and any other work history pertinent to the work package.

Work Release

The act of authorizing personnel to accomplish the work that is defined in the work instructions. Many elements are verified by the Releasing Authority prior to releasing work. See step 3.2.5.2. See also Release Authority.

Work Release for Construction/Servi ce Organization form (WRCSOF)

The Work Release for Construction/Service Organization form (WRCSOF) (A-6004-967) is used as an alternate mechanism to communicate work release. The WRCSOF may be used for construction activities and contracted activities identified through the Statement of Work process, and it may also be used between projects to clarify the release process

If there is a low probability of new hazards, the Release Authority may choose to release work on a WRCSOF less frequently than daily. Weekly is suggested, and in rare cases, longer could be appropriate.

The WRCSOF may not be used as a stand-alone work request and work authorization document; i.e., it must be associated with the appropriate work authorizing document and work instructions.

Work Request

The act of documenting a work task that will be processed through the Work Management System.

Work Sponsor

The person or organization who assumes responsibility for, pays for, or plans and carries out a project or activity. The work sponsor is the manager or organization that desires the work activity to be completed, and thus assumes responsibility for defining the acceptable deliverables and identifying and supplying funding and resources.

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Work Steps A subset of the Work Instructions between prerequisites and

restoration/retest, typically performed by the work team.

Working Copy A copy of all or part of a record copy WD that is used for performance of

work activities outside the facility or at FWS discretion. Changes to the WD or suspensions are accomplished by returning to the "Record Copy" and processing the changes in accordance with this procedure or your facility

specific Work Management procedure.

At the completion of the task, the working copy is returned to facility designated personnel for incorporation of data into the record copy

document.

See Appendix D for detailed instructions on the use of a working copy.

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Appendix C - Work Priority List

Facilities are responsible for assigning work priority levels. The following should be used to assist in determining appropriate priority levels.

Priority 1. The priority assigned to work packages that require immediate use of resources to prevent imminent danger to personnel, an environmental release, damage to plant equipment, or restore conditions to those required in the Safety Basis. Once compensatory measures have been taken to mitigate the initial hazards, follow on work will be given a lower priority. A condition which poses an immediate hazard to personnel, facilities, equipment, and/or the environment should be given priority 1 with the authorization of project management. Importance is great enough to justify the immediate diversion of personnel from other assignments and to work overtime, based on real-time circumstances. After the item has been resolved or immediately placed in a safe configuration, a priority 2 may be established. The work is necessary to:

- a. Prevent injury to personnel.
- b. Prevent a criticality event or release of hazardous substance or radiological material to the environment beyond the reporting values of PRC-PRO-EM-060.
- c. Bring systems back into compliance with Technical Safety Requirements (TSRs), permits or avoid imminent violation of these requirements.
- d. Prevent major equipment damage from an abnormal system condition.
- e. Repair Security Systems where an alternative system cannot be reasonably provided.
- f. Restore a Malfunction Alarm System that does not transmit an alarm to appropriate personnel. If alternate monitoring can be established, a Priority 1 may not be necessary.
- g. Correct nuisance alarms that divert personnel attention from other monitored parameters or equipment. Priority 1 is used if the nuisance condition continues for longer than 24 hours.
- h. Correct serious* Life Safety Code deficiencies and Fire system Emergency Impairments. Put compensatory measures in place as appropriate when required by the project fire protection engineer of the Fire Marshall (HFM) until repairs are complete. Submit a recovery plan, if required per MSC-RD-7899.

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Priority 1A. The priority assigned to work packages that would normally require immediate use of resources as a Priority 1, but cannot move forward because of issues beyond the control of the project or facility. Compensatory measures have been taken to mitigate the initial hazards, as appropriate to the problem, and follow on work will continue as if it were a Priority 1 when the impediment has been resolved. The facility is able to stay in compliance with regulations, but typically acknowledges some weakness because of the deficiency. A condition which if not corrected will cause greater damage or poses a potential safety concern. Importance is great enough to justify overtime work and to divert personnel from other assignments.

- a. Life Safety Code, fire system emergency impairment, or similar repair item for which materials cannot be immediately obtained.
- b. TSR item that cannot be confirmed as operable by surveillance testing by the due date because other facility deficiencies or conditions are interfering with or preventing the testing activities.
- c. Repair or correct problems impacting reliability of essential equipment/facilities, especially when alternate or compensatory measures are not equivalent to the equipment that needs repair.
- d. Repairs to relieve burdensome manpower needs that are required because the equipment is not working normally. This typically involves increased monitoring by people when an electronic system has failed, such as a fire system or security system.

Priority 2. The priority assigned to work packages that maintain safety and ensure that the facility is able to meet mission milestones while staying in compliance with regulations. A condition which requires priority to meet if not corrected is likely to lead to a more costly loss of production; a condition which is serious enough that for the safety of personnel, equipment, processes or the environment, systems must be taken out of service until a repair is completed. Planed project schedule, or P.O.C., or avoid significant cost impact. This work is necessary to:

- a. Repair or correct problems impacting reliability of essential equipment/facilities. This could apply to repairs following an emergency (Priority 1) response to put alternate but equivalent mechanisms in place. Equipment for which alternate or compensatory measure are not equivalent to the installed equipment should be priority 1A.
- b. Prevent release of hazardous or radioactive contamination to uncontrolled areas beyond prescribed limits (greater than CHPRC-00073, Table 2-2 for radioactive material).
- c. Perform Technical Specification/OSR Surveillance Procedures.
- d. Perform tasks essential to meet program goals, including deactivation and decommissioning activities. (Taking into account the importance assigned to the milestones and the nearness of the due dates.)
- e. Correct a closure facility hazard per PRC-PRO-SH-32621. This is a workplace hazard within a closure facility covered by a requirement of rule section 851.23.
- f. Perform Security Systems repairs (including repairs where alternate systems have been provided).

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- g. Perform necessary safety, or environmental equipment maintenance and repairs, such as non-serious *Life Safety Code deficiencies and fire system restrictions.
- h. Perform mandatory Periodic Maintenance procedures.
- Accomplish essential equipment/facility modifications.
- j. Correct conditions posing low probability, minor impact personnel safety issues.

Priority 3. The priority assigned to work packages that are necessary but do not jeopardize meeting safety requirements, project schedules, or maintaining plant operation. A condition which may be corrected as manpower and material become available. The work is necessary to:

- a. Prevent hazardous or radioactive contamination release to "Posted," controlled areas above action limits.
- b. Correct problems that impact facility or building habitability.
- Correct problems associated with non-essential but necessary equipment.
- d. Repair facility, or plant parts/equipment.
- e. Perform Periodic Maintenance procedures not identified as Priority 2.
- f. Modify equipment/facilities to improve operability or maintainability
- G. Correct conditions designated as personnel safety with very low probability of occurrence.

Priority 4. The priority assigned to routine work packages that are nonessential to meet program goals. A condition which may be corrected as manpower and material become available. The work is necessary to:

- a. Correct conditions designated as personnel safety but not Priority 1, 2, or 3.
- b. Perform tasks that are generally not directly related to the safety and operation of an area, facility, or plant.
- * Determination of serious or non-serious should be made in consultation with the assigned Fire Protection Engineer or Deputy Fire Marshal.

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Appendix D - Use of "Working Copy" Documents

There are times during the execution of work activities when it becomes ineffective to use the record copy for performance of work. When situations warrant, the use of a "Working Copy" (WC) document should be considered.

The WC is a copy of all or part of a record copy document that is used for performance of work activities at FWS discretion.

The following provides simple guidance on the use of WC documents.

- 1. The FWS determine that situations warrant use of a WC document (i.e., work in a contamination area or other, adverse environmental conditions where it is impractical to record directly onto the work package instructions, or multiple copies of a record copy are required for various work groups). In some cases, instead of generating a working copy it may be appropriate for data to be collected by a member of the group who is outside the contamination area if he or she is able to see the work and is able to communicate with the other workers.
- 2. Designated facility personnel print a copy of the record copy document. This copy becomes the WC.
- 3. The WC is clearly marked and numbered (i.e., Working Copy #1). Date of issue and to whom the WC was issued is documented on the original record copy.
- 4. Multiple WCs may be issued to a record copy document if required. It is essential that each WC is documented and accounted for to ensure all work activities are captured on the record copy document.
- 5. Work is performed using the WC to document activities performed. For contaminated area work, data/signatures are transferred to the work package when exiting the contaminated area and the WC is disposed of as radioactive waste.
- 6. If work needs to be suspended or a work change is required, these activities are accomplished by returning to the Record Copy and processing these activities as you normally would in accordance with this procedure or your facility specific Work Management procedure.
- 7. At the completion of the activity, the WC is returned to facility designated personnel who shall review for incorporation/retention of data into the record copy document. Return of the WC is documented on the WD.

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Appendix E - Minor Work Ticket /No Additional Planning Required

This appendix is to be used as directed in <u>Section 3.3.1</u>, Work Document Style Selection to support assignment of pre-approved tasks for No Additional Planning Required (NPR) and Minor Work Ticket (MWT) activities. The specific criteria of Table A or Table B must be met to be allowed to use the MWT or NPR style work document. All other work outside of a shop must be performed using planned work instructions. All work styles are record material.

Table C lists the types of activities that may be performed using a NPR or Minor Work Ticket style work document. PRC MWT is A-6004-645.

General considerations whenever performing skill-based work:

- All skill-based work that takes place in location with known or suspected presence of beryllium must comply with <u>Appendix J</u> of this procedure.
- Costs for any of these activities that fall under the Davis-Bacon Act may not exceed \$2,000
 per task unless Plant Forces Work Review concludes the work is to be performed by Plant
 Forces.
- Work that utilizes the MWT or NPR styles to work an item from Table C of this appendix is skill-based, and as such, should not trigger any of the HRB criteria of PRC-PRO-WKM-40004. HRB screening is only required for work that is beyond skill-based per PRC-PRO-WKM-079, Job Hazard Analysis.
- Any work within the Limited Approach Boundary of an electrical conductor must comply with PRC-RD-SH-11827, CHPRC Electrical Safety Program, and NFPA 70E 2009, Electrical Safety in the Workplace. To ensure compliance, the Arc Flash and Shock Hazard Analysis form A-6005-322, or an equivalent must be utilized each time such activity is performed on energized conductors ≥ 50 volts within the LAB. Acceptable equivalent methods include:
 - o A template with equivalent information in JCS, NPR code ARC-SHOCK
 - All required information written into a dated and signed entry in the Work Record of the work package
 - Refer to an approved Engineering document generated at the project for the work under consideration. The Engineering document would specify the hazard analysis for the equipment or panel. The accompanying Work Record entry should still specify the equipment and the applicable voltage.
 - Approved procedure or datasheet that provides blanks for the required information and electrical SME or qualified person concurrence
- Use caution when combining the items from Table C on one document. Ensure that adequate hazard controls are understood and implemented such as implementing LOTO when transitioning from electrical Testing & Troubleshooting to repair.
- All radiological work requires the interaction of the Radiological Protection (RP) group. Only
 a trained and qualified RP planner may verify the Radiological Hazard Screening or select
 the appropriate RWP for radiological work.
- No medium or high hazard radiological work is permitted on MWT or NPR documents.
 Medium or high hazard radiological work requires that radiological hazard controls be incorporated into the work instructions, and also require that a multi-discipline work team plan the work. See CHPRC-00073 articles 311.3 and 312.2.
- Standing work documents must meet the criteria of Section 3.3.1.2.

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Table A - Minor Work Ticket Use Criteria

- 1. Work activity/activities must be listed in Table C below.
- 2. The work must be non-radiological as defined by CHPRC-00073, or low hazard radiological as defined by PRC-PRO-RP-40108.
- Work has been determined to be skill-based, per the criteria in PRC-PRO-WKM-079, Appendix B. Consult <u>Appendix J</u> of PRC-PRO-WKM-12115 if work will take place in a building designated as Beryllium-suspect.
- 4. Equipment and material replacement, if required, is "Like-for-Like". No Modification work allowed. The work must not require FMP or redline documentation per PRC-PRO-EN-2001 or PRC-PRO-EN-20050. In some cases, shop work in support of an FMP or redline may be done on a MWT document, but all changes to the facility require planned work instructions.
- 5. Permits and documentation required for the work already exist (e.g., RWP, EEWP, standing arc flash analyses, vendor or manufacturer information and manuals, etc).
- 6. *NO* periodic maintenance that is recalled by the JCS, radiation monitoring instrument calibration or repairs, or work requiring ECO reporting per environmental permits is permitted on this type of WD. (e.g., repairs to effluent or discharge controls or monitors, underground fuel tank level instrumentation, etc.)
- 7. Work will only be performed on General Service systems, structures, or components (SSCs). Work must not affect the safety function, directly nor indirectly, of Safety Class, Safety Significant, Important to Safety (ITS) or Defense-in-Depth SSCs, nor any environmental effluent monitoring or control equipment, or any design features specified in TSRs or Hazard Classification documents.
- 8. Work must not affect the safety function of transportation or transportation packaging.

NOTE: LOTO is permitted per DOE-0336.

Table B - No Additional Planning Required Criteria

- 1. Work activity/activities must be listed in Table C below.
- 2. The work must be non-radiological per CHPRC-00073 or low hazard radiological as defined by PRC-PRO-RP-40108.
- 3. Work has been determined to be skill-based, per the criteria in PRC-PRO-WKM-079, Job Hazards Analysis, Appendix B. Consult Appendix J of PRC-PRO-WKM-12115 if work will take place in a building designated as Beryllium-suspect.
- 4. Equipment and material replacement, if required, is "like-for-like." No Modification work allowed. The work must not require FMP or redline documentation per PRC-PRO-EN-2001 or PRC-PRO-EN-20050. In some cases, shop work in support of an FMP or redline may be done on a NPR work document, but all changes to the facility require planned work instructions.

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5. Permits and documentation required for the work already exist (e.g., RWP, EEWP, standing arc flash analyses, vendor or manufacturer information and manuals, etc).

NOTE: LOTO is permitted per DOE-0336.

Table C Miner Work Ticket & NDD Work Types

NOTE: If the NPR document will impact DSA equipment, it must be annotated and appropriate requirements and actions stated. If great detail is necessary to appropriately document and manage DSA requirements, planned work instructions should be considered.

Table C – Minor Work Ticket	t & NPR Work Types
Descriptor	Detailed Description
D – D&D, or D4	Obtain RCT concurrence prior to work in any radiologically controlled area, including RBAs.
D-1 Remove equipment from a Cold & Dark facility	Remove equipment from a facility that is cold and dark, from which all sources of hazardous energy have been removed and any sources, such as electricity, come from outside the facility and are under the control of the D&D workers. Remove out of service wiring, raceways, or components.
	l tial of hazards such as PCB ballasts, Flamemastic or other insulation, etc. See the MDSD for more information.
E-Electrical	
E-01. Minor Electrical Repair	Perform minor electrical repairs, including component replacements with like for like material. Comply with DOE-0336 for energy isolation requirements and PRC-RD-SH-11827 for electrical safety requirements. To ensure compliance, the Arc Flash and Shock Hazard Analysis form A-6005-322, or equivalent must be utilized each time this activity is performed on energized conductors ≥ 50 volts within the LAB
E-02. Relamping	Replacement of equipment indicator lamps (if lamps can be replaced without having to disassemble the component) as well as incandescent, fluorescent, high-pressure sodium mercury vapor, or metal halide light bulbs or tubes. Properly dispose of waste in accordance with applicable operations waste handling procedures and maintenance procedures. Visual inspection, cleaning and relamping of panel board indicators. To ensure compliance with NFPA 70E 2009 and PRC-RD-SH-11827, the Arc Flash and Shock Hazard Analysis form A-6005-322 or equivalent must be utilized each time this activity is performed on energized conductors ≥ 50 volts within the LAB.

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Table C – Minor Work Ticket & NPR Work Types	
Descriptor	Detailed Description
E-03. Electrical Cover Plates/Panels/Control Panel Doors	Replacement in kind of missing panel covers, screws, handles, etc., on control panels and electrical hardware. Replace switch/outlet/junction box cover plates. Repairing or adjusting latches, hinges, panel covers, screws, handles and closures on control panels and electrical hardware, including adjustment and lubrication of closures, latches and hinges (no drilling into electrical enclosures). If possible, determine whether electrical wiring is in the path of screws or other attachments that penetrate the cover.
E-04. Circuit Breaker Reset/Replace Fuses	Replacement of blown fuses (with like fuses only) or resetting open circuit breakers once it has been determined that the equipment and circuit(s) can be safely energized. If the fuse is replaced once and blows again within a short period of time, troubleshooting and repair are required to determine and correct the cause before the fuse may be replaced again.
	To ensure compliance with NFPA 70E 2009 and PRC-RD-SH-11827, the Arc Flash and Shock Hazard Analysis form A-6005-322, or equivalent must be utilized each time this activity is performed on energized conductors ≥ 50 volts within the LAB.
E-05. Replace/Charge Batteries	Replace or charge batteries on plant equipment.
Buttories	To ensure compliance with NFPA 70E 2009 and PRC-RD-SH-11827, the Arc Flash and Shock Hazard Analysis form A-6005-322, or equivalent must be utilized each time this activity is performed on energized conductors ≥ 50 volts within the LAB.
E-06. Clean Light Fixtures	Clean light fixtures and small exhaust fans.
& Small Exhaust Fans	To ensure compliance with NFPA 70E 2009 and PRC-RD-SH-11827, the Arc Flash and Shock Hazard Analysis form A-6005-322, or equivalent must be utilized each time this activity is performed on energized conductors ≥ 50 volts within the LAB.
E-07. Electrical Switch and Circuit Repair & Replacement	Replace light switches or receptacles, condensers and ballasts. To ensure compliance with NFPA 70E 2009 and PRC-RD-SH- 11827, the Arc Flash and Shock Hazard Analysis form A-6005- 322, or equivalent must be utilized each time this activity is performed on energized conductors ≥ 50 volts within the LAB. NOTE: Consider the potential of hazards such as PCB ballasts, Flamemastic or other asbestos electrical insulation, etc. See the MDSD for more information.

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Table C – Minor Work Ticke	t & NPR Work Types
Descriptor	Detailed Description
E-08. Minor Electrical Troubleshooting & Diagnostic Checks	Testing and troubleshooting are limited to those actions necessary to measure voltage and current and to verify the operability of equipment without repairing or replacing components.
	Taking voltage, current (clamp-on ammeter) and resistance readings on electrical circuits is permitted.
	 Lifting of leads to obtain readings is permitted provided the lifting and landing of the leads is tracked in the WO and the leads are landed within the same shift.
	 Troubleshooting on energized equipment is exempt from the requirement to prepare an EEWP justification only when the troubleshooting cannot be performed when the equipment is de-energized.
	Troubleshoot minor electrical problems using the following guidelines:
	 Equipment must be operated within the guidelines of existing operating procedures to obtain visual and operating data.
	 Whenever diagnostic checks are performed within the LAB of energized electrical circuits, the requirements of PRC-RD-SH-11827 CHPRC Electrical Safety Program Requirements apply.
	c. To ensure compliance with NFPA 70E 2009 and PRC-RD-SH-11827, the Arc Flash and Shock Hazard Analysis form A-6005-322, or equivalent must be utilized each time this activity is performed on energized conductors ≥ 50 volts within the LAB.
	d. Comply with DOE-0336 for energy isolation requirements.
	The troubleshooting activities must be concurred with by Operations.

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Table C – Minor Work Ticket & NPR Work Types	
Descriptor	Detailed Description
F – Facility Management	
F-01. Facility Management Decision	Minor maintenance items that do not constitute a modification and have been approved by the manager of Work Control or other manager or staff member given the authority to approve such items in writing by the Facility Director. To use this option, the desired work activity must be: Clearly bounded Meet all criteria except item #1 of either Table A or B in this appendix Approved in writing by the designated manager This activity is not appropriate for a standing work document, unless one of the designated individuals above approves it in writing each time it is used.
F-02 Approved Procedures	**NPR only** Existing work instructions in the form of an approved procedure may be used in lieu of newly developed work instructions. See step 3.3.1.1.b in. the body of this procedure. Normally, periodic maintenance (PM) work activities are recalled and packaged per PRC-PRO-MN-19304. Procedures are developed per administrative processes that ensure that the ISMS Core Functions and EMS Core Elements are incorporated appropriately, and therefore work generated in accordance with PRC-PRO-MN-19304 is not required to meet the NPR criteria listed in Table B. Operations and radiological procedures are used as stand-alone documents by individuals trained and qualified in their use to perform their normal work activities. These procedures do not require scheduling or work release under normal circumstances, and are not usually incorporated into a work package.
G - General	
G-01. Fab/Install/Replace Equip. Labels, Tags and Facility Signs	Fabricate and install instrument, valve and other equipment labeling and identification tags. Fabricate and install miscellaneous signs. Replace missing status labels (e.g., calibration stickers, functional test, indication and inactive equip. labels, etc) once they have been verified by the use of drawings, PMs, etc. Replace worn or damaged signs, labels or identification tags. Remove signs no longer needed as approved by facility management.

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Descriptor	Detailed Description	
G-02. Walk Downs	Support of any walk down activity including engineering and planning support. This is intended to be a look-only activity. (See Troubleshooting in the Glossary.)	
G-03. Replace Ceiling & Floor Tile and Carpeting	Remove or replace damaged or loose non-asbestos ceiling or floor tiles and carpeting. (Non-asbestos requirement also applies to any associated mastic or adhesive).	
	O-SH-15097, Asbestos Control-Construction Industry, for sbestos vs. non-asbestos work.	
G-04. Housekeeping & Cleaning	Housekeeping/cleaning in and around affected facilities except for cleaning inside control or power distribution panels.	
G-05. Repair/Replace Doors	Minor repairs and adjustments on fire and non-fire doors. Adjusting or lubricating hydraulic/pneumatic door closers, crash bars, hinges, latches, door stops, door sweeps, weather stripping, kick plates, handrails, balance magnetic switches (BMS), and access control switches on personnel and equipment doors. Repair/replace locks and sensors; fabricate keys. Inspection, troubleshooting and adjustments (not repairs) of roll-up doors may be performed, if applicable vendor information is available.	
	Worn or broken doors may be replaced with like-for-like equipment if the door does not have electrical circuits, and if the door is not part of a pressure boundary, fire boundary or other documented safety feature of the facility.	
	PFP - Work <i>is not</i> allowed on touch sensitive doors (Doors 371, 404, 429, & 610).	
NOTE: Fire doors may require a retest per operating or surveillance procedures to assure operability.		
G-06. Miscellaneous Portable Appliances & Tools	Inspect, repair, replace and install miscellaneous portable equipment and shop tools. See also G-41, inspection of rental equipment.	
G-07. Install/Remove Temporary Equipment	Installing/removal of temporary, portable pumps, heaters, and lighting where no hard wiring is required and no plant equipment is removed from service. See also G-41, inspection of rental equipment.	

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Descriptor	Detailed Description
G-08. Shop Work & Fabrication of Non-Engineered Items	Miscellaneous shop work including welding and repair or assembly of portable plant equipment/tools. Mockups of Research & Development project work. Shop fabrications that do not have any operational impact on the facility. Welding and grinding must comply with the criteria of HNF-42884 and PRC-PRO-SH-31697.
G-09. Rigging &	Install/remove scaffolding and general rigging (no critical lifts).
Scaffolding	Perform scaffold inspections.
G-10. Opening/Closing Boxes & Crates	Craft support opening and closing boxes and crates (banded, screwed or nailed).
G-11. Grounds Maintenance	Remove waste, trash, and maintain parking areas and tour paths, including washing facility structures and roads. Mow & trim lawns and shrubbery; weed removal and cleanup.
G-12. Spraying Weeds & Insects	Spraying for control of weeds and insects. (MSDS required).
G-13. Roof, Floor, Siding & Wall Repairs	Small scale roof, floor, wall, stair, landing, window, ceiling and/or siding repairs to the interior and exterior of structures. No structure modification allowed. No core drilling allowed.
	Costs not to exceed \$2,000 per task unless PFWR concludes work to be performed by Plant Forces.
G-14. Painting	Performance of painting on structures and equipment where material used is approved for onsite use and there are no special PPE requirements or other special safety precautions required (i.e., Fall Protection, Overhead Electrical Hazards).
	Costs not to exceed \$2,000 per task unless PFWR concludes work to be performed by Plant Forces.
	Spray painting must comply with the criteria of PRC-PRO-SH-31697.
	See G-39 for road striping activities.
G-15. Install Non-Skid Pads	Install new or repair/replace non-skid pads for steps and other areas.
G-16. Replace Glass	Replace broken window glass.
NOTE: Not permitted if window is part of a pressure boundary.	

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Descriptor	Detailed Description
G-17. Equipment & Furniture Moves	Movement of equipment or furniture, not to include disconnecting of hard-wired equipment. This includes lifting awkward or heavy equipment (general rigging or teamster moves).
G-18. Troubleshoot & Repair Vehicle and Pedestrian Gates and Fences	Troubleshoot/repair of vehicle/pedestrian gates, and fences not to include keycard or limited-latching mechanisms. Inspect, clean and adjust gates and fences. Notify and coordinate with Patrol prior to any security fence repairs.
G-19. Snow & Ice Removal	Removal of snow and ice, and application of de-icer where needed.
G-20. Add Fill Material/Gravel	Adding shallow layers of fill material/gravel.
G-21. General Support	Routine activity such as cutting, sawing, roof repairs, etc. Hanging or removing (<50#) items from walls, including bulletin boards, chalk or marking boards, clocks and pictures. Assemble, disassemble, and repair office equipment, furniture, workbenches, including movement and relocation. Perform other wood product-related or similar work activities. Only non-asbestos work is allowed. Refer to PRC-PRO-SH-15097 for determination of asbestos vs. non-asbestos work.
G-22. HVAC	Heating and Ventilation System/equipment – Inspection, Clean, troubleshooting, repair and replacement of Heating, Ventilation, and Air Conditioning (HVAC) units (e.g., air conditioners, swamp cooler, roof vents, heat pumps, and space heaters). Breaching a refrigerant system must be performed by a certified
G-23. Portable Eyewash	individual and may require ECO concurrence. Checks and maintenance. If a periodic maintenance procedure
Station Maintenance	exists for the equipment, consult PRC-PRO-MN-19304 and determine whether that procedure should be utilized for this task.

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Descriptor	Detailed Description
G-24. Insulation Repair	Repair/replace insulation. Only non-asbestos work is allowed. Refer to PRC-PRO-SH-15097, for determination of asbestos vs. non-asbestos work.
	Asbestos Class IV abatement <u>preparation</u> work including; sealing of penetrations/openings, set up of glove bags, staging of materials and equipment. Refer to PRC-PRO-SH-15097, Section 2.1 for requirements.
	Costs not to exceed \$2,000 per task unless PFWR concludes work to be performed by Plant Forces.
	New insulation may be installed in specific applications IF the DA/TA signs to confirm that there are no structural issues, the addition of the material does not constitute a modification, and the type of material is suitable for the application.
G-25. Outside Resource	Support for work performed by other support groups, e.g., Security Maintenance, Fire Department, Utilities, Pest Control, LMSI, RES, Vent and Balance, Light/Heavy-Duty Mechanics, Re-Bar Scan, NCOs, RPTs, etc., utilizing their approved procedures, or as skill-based work if it meets the criteria.
	This may also be used for vendor inspection and/or maintenance of vendor-owned equipment under rental or lease agreement to a Hanford contractor. See also G-41.
	The support group's procedures must demonstrate hazard identification and control, and that the activity has been evaluated by facility personnel for hazards at the work location and, if a Haz Cat 2 or 3 Nuclear Facility, perform the appropriate USQ review. If these requirements are not met, the facility may choose to generate supplemental work instructions to fill in the gaps. The supplemental work instructions must be planned work per Section 3.2.3 and following.
G-26. Vibration Analysis	Perform Vibration Analysis.
G-27. Remove & Disassemble Deactivated Equipment	Remove/disassemble deactivated and obsolete equipment systems and components. Deactivation does not include all decontamination necessary for the dismantlement and demolition phase of decommissioning
	(e.g., removal of contamination remaining in the fixed structures and equipment after deactivation). This option may only be used if the hazards involved for the work activity are known, and workers are trained and qualified in this type of work.

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Descriptor	Detailed Description
G-28. NDE Activities	Perform non-destructive evaluation activities in support of job planning or troubleshooting, NOT for quality assurance data recording purposes (e.g. rebar scanning, dye-penetrate testing, leak checking, ground penetrating radar scanning, etc.). NDE activities that have the potential to change radiological conditions or introduce undefined hazards must be performed using planned, approved instructions.
G-29. Install/Remove & Relocate Jersey Barriers	Install/remove/relocate Jersey barriers.
	l ey barriers that constitutes a critical lift is not allowed as a NPR as an applicable pre-approved critical lift procedure exists.
G-30. Plumbing Repairs	Cleaning, repairing, replacing, unplugging, etc. of all fixtures and/or plumbing on sanitary systems.
G-31. Handrails	Install new or repair/replace wood or metal handrails. Set-up or tear down temporary handrails as requested by the facility.
G-32. Concrete Repair	Repair defects or damage to existing sidewalks, walkways, patios, landings or slabs. Radiological surveys may be required.
G-33. New Concrete Installation	Prepare surface, build forms, mix and pour concrete for areas that are not required to be shown on drawings or for which structural analysis is required. This may include sidewalks, walkways, patios, landings, curbing and slabs, etc. Radiological surveys may be required. May not disturb native soil below six (6) inches, or ground scans may be required prior to work.
G-34 Routine Material and Equipment Pick-up and Delivery	Pickup and delivery of parts, equipment, materials, etc. to/from warehouses, staging areas, facilities, etc. Includes use of forklifts, lift trucks, dollies, carts, etc., by trained and qualified workers. If applicable, ensure shipping paperwork is processed properly.

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Descriptor	Detailed Description
G-35 Replace Windsocks	Change out wind socks as necessary. This applies to replacing existing socks, and can be used to change out existing stanchions if doing so does not require more than ordinary hand tools. This activity may be done at locations that are normally accessible by foot or locations accessible by aerial lifts operated by persons with the appropriate training and qualification. Locations that present radiological or industrial hazards to the worker shall be evaluated individually for this activity.
G-36 Misc. Sheet metal	Construct, install, repair miscellaneous sheet metal items in locations that are non-radiological or low-hazard radiological. Installation that requires anchors must be reviewed by the DA/TA signs to confirm that there are no structural issues and the addition of the material does not constitute a modification.
G-37 Ladder Inspections	Perform inspections of portable and fixed ladders.
G-38 Road Surface Patches and Grading	Minor road repairs or grading on existing surfaces. This may include asphalt or other surfaces. Per Public Law 100-605, work within one quarter mile of the river that is not routine operations and maintenance (e.g., fence repairs, lighting repairs, road repairs, etc.) must be reviewed by Environmental Protection for possible approval from the Department of Interior before work starts.
G-39 Road Striping	Painting and restoring road and highway markings on existing road surfaces. Performance of painting where material used is approved for onsite use and there are no special PPE requirements or other special safety precautions required (i.e., Fall Protection, Overhead Electrical Hazards). Costs not to exceed \$2,000 per task unless PFWR concludes work to be performed by Plant Forces. Spray painting must comply with the criteria of PRC-PRO-SH-31697. See G-14 for painting structures and equipment.
G-40 Transport Hazardous Waste Containers	Transport hazardous waste containers per an appropriate approved shipping document. Personnel meet training requirements in PRC-PRO-TP-166, Transportation Safety Training.
G-41 Rental Equipment Receipt, Placement and Inspection	Accept delivery of rental equipment from vendor, stage and set- up for use. Perform pre-use inspections per vendor or manufacturer instructions or per facility checklists, if they exist. Confirm acceptable with Hanford safety requirements. Evaluate whether periodic inspections are appropriate. If so, set up a mechanism to ensure they occur as needed.

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Descriptor	Detailed Description
G-42 Non-disturbing activities in a Beryllium Controlled Facilities	Walkdown a job, implement LOTO or perform other activities that do not have a potential to disturb beryllium, but for which a BWP is required for entrance.
G-43 Fire Extinguisher checks	Fire extinguisher inspections by the Hanford Fire Department personnel in a facility. There must be a list of locations or extinguisher numbers, and steps to be accomplished for each unit.
I - Instrument	
I-01. Troubleshoot/ Repair/ Replace/Adjust Instrumentation	Troubleshoot/ repair/replace and/or adjust of instrumentation to return system to service, using like for like material.
msuumentation	Repair of electrical conductors requires LOTO per DOE-0336 or an EEWP per NFPA 70E 2009If the instrument calibration will be affected, calibration must be performed (via a work package, not allowed on MWT) following the work and prior to returning the instrument to service.
NOTE: Notify impacted co	ntrol rooms before generating any alarms.
	Troubleshoot minor electrical problems using the following guidelines:
	 Equipment must be operated within the guidelines of existing operating procedures to obtain visual and operating data.
	 b. To ensure compliance with NFPA 70E 2009 and PRC-RD-SH-11827, the Arc Flash and Shock Hazard Analysis form A-6005-322, or equivalent must be utilized each time this activity is performed on energized conductors ≥ 50 volts within the LAB.
	c. Comply with DOE-0336 for energy isolation requirements.
	d. Taking voltage, current (clamp-on ammeter) and resistance readings on electrical circuits is permitted.
	e. Lifting of leads to obtain readings is permitted provided the lifting and landing of the leads is tracked in the work package and the leads are landed within the same shift. See A-6004-960 and A-6004-958.
	f. The troubleshooting activities must be concurred with by Operations.
	g. Troubleshooting on energized equipment is exempt from the requirement to prepare an EEWP justification <u>only</u> when the desired troubleshooting cannot be performed when the equipment is de-energized.

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Descriptor	Detailed Description	
I-02. Instrument Cleaning & Upkeep	Visual inspection, cleaning, paper change, replenish ink, changing out gas cylinders, relamping of panel board indicators.	
	To ensure compliance with NFPA 70E 2009 and PRC-RD-SH-11827, the Arc Flash and Shock Hazard Analysis form A-6005-322, or equivalent must be utilized each time this activity is performed on energized conductors ≥ 50 volts within the LAB.	
I-03 SAS Instrument Adjustments and Maintenance	SAS equipment adjustments and maintenance on low voltage (<50 volt) systems, including like-for-like component replacements (no modifications).	
	Coordination with facility Operations personnel and Patrol staff is required, as necessary, for the work activity.	
I-04 Computer Upkeep and Repair	Troubleshoot and repair computer systems that are not the jurisdiction of LMSI (plant or system computers that are not HLAN). May swap cards and components and perform other activities that do not affect control of plant systems or hardware (activities will not change plant or equipment system control programming).	
M - Mechanical		
M-01. Lubrication of Equipment	Changing or adding lubrication oil, grease, etc. to various pumps, compressors, fans, couplings, motors, linkages, etc.	
NOTE: This applies to "run-to-fail" equipment and does not apply to PM recall activities.		
M-02. Change-out Gas Bottles	Changing out of compressed gas bottles. Included is delivery activities and inventory/storage of gas bottle storage areas.	
M-03. Filter Cleaning and Changing	Clean or change filters/strainers/desiccant on equipment (of less than 150 PSI/125° F).	
M-04. Minor Mechanical Repair, Replacement & Adjustments, including Manipulators	Perform minor mechanical repairs using like for like material to mechanical systems, components, equipment and instrumentation. Make adjustments as necessary to return equipment to service. Adjust manipulators and make minor repairs such as fuse or tape replacement. Minor repair/replacement of equipment fixtures, systems, components and instrumentation. Does not include activities that could affect shielding. Comply with DOE-0336 for energy isolation requirements.	
	At 100K, adjust basin monorail interlocks, rails, fan belts and other equipment adjustments as required; add and/or recirculate hydraulic system fluids.	

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Descriptor	Detailed Description			
M-05. Water and Air	Remove/Install caps/plugs/miscellaneous fittings/quick			
Systems	disconnects.			
M-06. Refrigerant	Add/remove refrigerant to/from chillers per State - approved method (only certified individuals may perform this task).			
	metrica (erriy cortinea marviadale may perferm tine tacity.			
M-07. Resin Bed Change	Change out resin bed cylinders, using standard safe working practices.			
M-08. Minor Mechanical Troubleshooting	Troubleshoot minor mechanical problems using the following guidelines:			
	 Equipment must be operated within the guidelines of existing operating procedures to obtain visual and operating data. 			
	b. Taking vibration and temperature readings are permitted.			
	 c. Application of an approved leak detection fluid to a pressurized piping/tubing system is permitted. 			
	d. Comply with DOE-0336 for energy isolation requirements.			
M-09 Landscape Sprinkler Repairs	Repair of landscape sprinkler systems where an excavation permit is not required.			

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Appendix F - NEPA DOCUMENTS

This Appendix lists the existing NEPA documents that provide the basis for the graded approach screening process described in <u>Section 3.2.3</u>. Per PRC-RD-EP-15332, changes to this appendix require the approval of Environmental Protection.

The content of this appendix was accurate on the publication date of this procedure revision, and the Environmental Protection functional group will review the contents of this appendix and update them as necessary during development of each revision. Consult the ECO at your facility or the Environmental Protection functional group regarding concerns or questions related to this information. The Environmental Protection web site (http://prc.rl.gov/rapidweb/Environmental/index.cfm?pagenum=1&CFID=7164787&CFTOKEN=64962735&jsessionid=dc305ec5b7f35328d643137287926e41d924 contains helpful information related to all the environmental regulations applicable on the Hanford site. The complete listing of environmental site wide categorical exclusions (SWCX), environmental assessments (EA) and other environmental documents that have been approved for the CHPRC projects at the Hanford site may be viewed on this website. Development and implementation of all documentation is accomplished per CHPRC Environmental Protection procedures.

A review for applicable environmental requirements shall be conducted for activities involving:

- Constructing or modifying facilities, equipment, or processes;
- Maintaining and repairing facilities, equipment, or processes; or
- Discontinuing use of, deactivating, decontaminating, dismantling, or closing facilities, equipment, or processes.

This review shall be documented by either:

- Incorporating reference to sitewide categorical exclusions (SWCXs) and other DOEapproved National Environmental Policy Act (NEPA) documentation (as appropriate) into an applicable high-level work control procedure (such as this one), or
- Using the Automated Job Hazards Analysis system, or
- Completing the Environmental-Activity Screening form (Site Form A-6004-962).
- The environmental review for skill-based work as defined in PRC-PRO-WKM-079 may be documented in the JCS software without using an EASF if a specific field for that purpose is available and the work is not a modification.

Categorical exclusions may only be applied by persons meeting the training requirements in PRC-RD-EP-15332, and as authorized by the ECO with authority for the Project or Facility where the work activity will occur. (The minimum requirement for a person to be allowed to apply environmental categorical exclusions is completion of Course #170130.) The ECO at a specific facility or project may declare that this appendix constitutes "an applicable high-level work control procedure" if he or she has reviewed the appendix for that purpose in light of the work at the facility or project, and issues a memo stating that fact. The memo should state the limits of this application by types of work or specific buildings, if any exist. The memo should also list by name those individuals authorized by the ECO to apply information in this appendix to work documents.

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Deactivation & Decommissioning

General minor programmatic activities performed under this Work Management Procedure are normally within the scope of approved SWCXs including B1.3, B1.16, B1.17, B1.22, B1.23, B1.24, B1.27/28, B1.31, B2.5, and B3.1.A specific Hanford Site EIS addressed some aspects of D&D: DOE/EIS-0119, *Decommissioning of Eight Surplus Production Reactors at the Hanford Site, Richland Washington.* Specific environmental assessments have been prepared to address alkali metal test loops (DOE/EA-0987); steam plants (DOE/EA-1177); and the Plutonium Finishing Plant (DOE/EA-1469).

Under these conditions (i.e., minor activities or those addressed in specific NEPA reviews) no additional NEPA review/documentation is required.

NOTE: B1.27/28 is the primary SWCX used for deactivation activities. For this Work Management Procedure, "minor" is the key word. The actual language is:

B1.27: Activities that are required for the disconnection of utility services such as water, steam, telecommunications, and electrical power after it has been determined that the continued operation of these systems is not needed for safety.

B1.28: Minor activities that are required to place a facility in an environmentally safe condition where there is no proposed use for the facility. These activities would include, but are not limited to, reducing surface contamination, and removing materials, equipment or waste, such as final defueling of a reactor, where there are adequate existing facilities for the treatment, storage, or disposal of the materials, equipment or waste. These activities would not include conditioning, treatment or processing of spent nuclear fuel, high-level waste, or special nuclear materials.

All activities posing unique components (e.g., level of contamination, unique material or waste handling and/or packaging) in individual, specific facilities need to be reviewed and documented for NEPA compliance.

NOTE: All non-CERCLA D&D activities in the 300 Area must be reviewed for NEPA coverage by CHPRC Environmental Protection.

Fast Flux Test Facility (FFTF)

At FFTF, the majority of activities have been addressed in WASH-1510, *Environmental Statement, Fast Flux Test Facility, Richland, WA*; DOE/EA-0993, *Environmental Assessment; Shutdown of the Fast Flux Test Facility*; and DOE/EA-1547F, *Sodium Residuals Reaction/Removal and Other Deactivation Work, Fast Flux Test Facility (FFTF) Project, Hanford Site, Richland, Washington.* WASH-1510 evaluated the impacts associated with the construction and operation of FFTF, including all phases of fuel fabrication, handling, storage, and transportation. DOE/EA-0993 evaluated the impacts, associated with shutdown activities, including the Sodium Storage Facility and Interim Storage Area. DOE/EA-1547F extended deactivation activities to include reacting sodium residuals remaining after draining bulk sodium.

All routine corrective maintenance and surveillance activities have been reviewed for NEPA and are addressed by SWCX B1.3, Routine Maintenance of Building, Facilities, and Structures. In some cases other SWCX may apply as well (e.g., SWCX B1.2, Emergency Exercises and Training Program, SWCX B1.7, Telecommunications, SWCX B1.16, Repair, Removal, Handling, and Disposal of Asbestos, SWCX B1.17, Removal of PCB containing items, or SWCX B2.5, Safety and Environmental Improvements of a Facility).

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Soil & Groundwater Remediation Project, SGRP

All activities within this procedure normally meet NEPA review requirements and documentation covered by use of ERDA-1538, DOE/EIS-0189, DOE/EIS-0245, DOE/EIS-0286, DOE/EA-0383, DOE/EA-0915, DOE/EA-0944, DOE/EA-0981, DOE/EA-0985, DOE/EA-1185, DOE/EA-1189, DOE/EA-1203, DOE/EA-1276, DOE/EA-1369, and approved site-wide categorical exclusions (SWCX) B1.2, B1.3, B1.6, B1.7, B1.15, B1.16, B1.17, B1.27/28, B1.31, B2.5, B5.1, B6.6, and Safeguards and Security SWCX. Under these conditions, no additional NEPA review/documentation is required. All modifications that are not administrative shall be NEPA reviewed and documented for NEPA compliance.

100K Area Project

The activities performed in this procedure are within the scope of the approved NEPA SWCXs as follows: B1.2, B1.3, B1.6, B1.7, B1.15, B1.16, B1.22, B1.23, B1.24, B1.27/28, B1.31, B2.5, B3.1, B3.6, B3.11, B3.12, B5.1 & B6.6. Some activities may be included with in the scope of the Environmental Assessments, primarily: EIS-0245D, EIS-0245/SA1, EIS-0189, EIS-0189/SA2, EA-1185, EA-1111, EA-1030, & EA-0988. Additionally, elements of HNF-5356, Rev 5, Section 3.5.5 i, ii, iii, iv Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) apply. Activities, which would require an FMP for facility configuration changes, will have a NEPA screening as part of the work package that implements that configuration change.

Per Public Law 100-605, work within one quarter mile of the river that is not routine operations and maintenance (e.g., fence repairs, lighting repairs, road repairs, etc.) must be reviewed by 100K Environmental Protection for possible approval from the Department of Interior before work starts.

Plutonium Finishing Plant Closure Project (PFP)

Most work activities performed under the authority of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) are excluded from NEPA authority. All D&D activities associated with the PFP building are addressed by the *Action Memorandum for the Plutonium Finishing Plant Above-Grade Structures Non-Time Critical Removal Action*, DOE/RL-2005-13 and associated removal action work plans.

On a limited scope, PFP may conduct work under NEPA authorities. Non-CERCLA activities performed in this procedure are within the scope of DOE-EIS-0244-F (and Supplemental Analyses FS/SA1 through FS/SA10), DOE/EA-1112, DOE/EA-1469, and the following PFP-specific Categorical Exclusions (CXs): CX for Plant Scale Batch Test for Oxalate Precipitation; CX for Receipt and Storage of Unirradiated Fuel Rod; CX for Deactivation and Demolition of 30 Ancillary Buildings; CX for Transition of the 241-Z Treatment and Storage Facility; CX for Transition of the 232-Z Contaminated Waste Recovery Process Facility, and CX for Disposition of Fuels Materials and Sources.

In addition to the above, the Hanford Site has several SWCXs, which streamline the NEPA documentation process. A list of approved SWCXs used by CHPRC is available on the Hanford Intranet, CHPRC Environmental Protection, NEPA/SEPA and Cultural/Ecological Resources Page under "Documents and Reports" and "Site Wide CX Listing." Although most of them are available for use, PFP primarily uses the following SWCXs: B1.3, Routine Maintenance; B1.15, Siting, Construction, and Operation of Small-Scale Support Buildings, Modifications of Buildings; B1.27/B1.28, Categorical Exclusion for Building Stabilization and Deactivation Activities; and B2.5, Safety and Environmental Improvements.

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Waste and Fuels Management Project

All activities within this procedure normally meet NEPA review requirements and documentation covered by use of ERDA-1538, DOE/EIS-0189, DOE/EIS-0245, DOE/EIS-0286, DOE/EA-0383, DOE/EA-0915, DOE/EA-0944, DOE/EA-0981, DOE/EA-0985, DOE/EA-1185, DOE/EA-1189, DOE/EA-1203, DOE/EA-1276, DOE/EA-1369, and approved site-wide categorical exclusions (SWCX) B1.2, B1.3, B1.6, B1.7, B1.15, B1.16, B1.17, B1.27/28, B1.31, B2.5, B5.1, B6.6, and Safeguards and Security SWCX. Under these conditions, no additional NEPA review/documentation is required. All modifications that are not administrative shall be NEPA reviewed and documented for NEPA compliance.

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Appendix G - Panelboard Modifications at the Plutonium Finishing Plant (PFP)

If work is modifying a panelboard schedule the Design Authority System 12 or designee will use a red marker to sign and date a copy of the current panelboard schedule from the FMP and mark it as "Work in Progress per FMP-XXX and Work Package #2Z-XX-XXXXX." He or she will remove the old panelboard schedule and replace it with the new schedule, which is to remain on panel while work package is in post review and until the essential drawing is updated and posted. The old schedule shall be destroyed, or may be retained in the work package, clearly marked as the old schedule, if the DA/TA desires to retain it for information. In no case shall the old schedule remain posted on the panel.

In the event that subsequent modifications to the panel would present a conflict with the first temporary schedule, the Design Authority is to use a red marker on schedules to transcribe changes from the preceding schedule with the reference to the changing FMP. In all cases, the panel schedule will be validated as reflection of current field conditions and designated by signature of the Design Authority or designee.

If an electrical panelboard has been modified, the panelboard schedule shall be tagged "Work in Progress" listing the Design Authority System 12 as the contact until the essential drawing H-2-99550, Sheet 45, Panel Schedule Pnlbd E, is updated and posted.

The work package will remain in a post review status until the schedule is posted. Verify that the work package contains a signature verification step requiring posting of the revised panel schedule.

Other projects that have not identified a process for panelboard modifications may also follow this process, updating the appropriate drawings for the respective panelboards.

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Appendix H - Construction Interfaces

SOW Development

The BTR, using this appendix and working with a Work Management Representative, will identify the appropriate Work Management process requirements, determine the level of controls, and ensure those requirements and controls are incorporated into the Statement of Work (SOW), as outlined in PRC-PRO-AC-186. Multiple SOW Templates are available to the BTR (i.e. non-hazardous, construction, hazardous templates) depending on the scope of work to be performed.

The contents of this appendix are derived from contract requisition processes and related requirements found in PRC-RD-SH-12386, PRC-PRO-AC-186, PRC-PRO-AC-123, and PRC-PRO-AC-192.

The Work Management Representative (WMR) is the SME for Work Control issues for the location where the work will occur. This appendix is intended to guide the BTR and the respective WMR during development of the SOW to ensure that the Release Authority at the work site will have no reason to refuse release at the appropriate time. The SOW Template calls out all the necessary subjects to be considered by the BTR. This appendix discusses only those topics that are within the expertise of the WMR. See Table A for these topics.

In general, the WMR needs to understand enough about the proposed work to be able to request important elements are contained in the SOW to ensure the work can be authorized when field work is ready to begin. The Release Authority must be able to provide a safe working boundary for all workers, to understand any impacts to the project or facility or area that would impact configuration control, safety basis elements, emergency preparedness responses, and adjacent work activities when releasing the work. The RA must also understand any elements that would affect recovery of the facility or area after the work is completed. The WMR should only suggest inputs to the SOW that could affect providing a safe working boundary, work release, facility configuration or safety, or public safety related to the proposed work activity.

Terms used in this appendix include:

- <u>BTR, Buyer's Technical Representative</u> the person authorized to prepare a task order, contract, or other statement of work, then monitor the contractor and his progress, interfacing with the owner. See PRC-PRO-AC-186 and PRC-PRO-AC-192.
- Owner in effect, the responsible project manager for the location where the work will take place, or an authorized representative.
- Release Authority (RA) the owner's employee who is designated to authorize field work at a given location or facility.
- <u>Supervisor</u> the person in charge of the workers; for a supplying organization this is the manager or foreman over the supplied workers, often referred to as the Construction Manager, CM. This person may also be the BTR. For Hanford employees, it is someone qualified as a Fieldwork Supervisor, or FWS. Sometimes a Hanford FWS will be identified as the point of contact for the supplying organization, but only the supplying organization's supervisor will give direction to the contracted personnel.

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- <u>Supplying organization</u> the organization that comes into the owner's facility/area to perform work, often referred to as contractor or sub-contractor.
- <u>Statement of Work (SOW)</u> identifies hazards, working conditions, work control documents and work instructions that need to be communicated to the Contractor. If required, these elements will be included in the Work Package used to perform work in the field. In general, EPC Construction will always choose to utilize a work package.
- <u>Task Charge Authorization (TCA)</u> identifies hazards, working conditions, and work control
 documents to be utilized including safety requirements that need to be communicated to the
 CM, and ultimately the written Work Package used to perform work in the field.
- Work Management Representative (WMR) the owner's representative for a given location or facility, who is familiar with work release and surrounding issues.

BTR responsibilities related to SOW development in the area of work control:

- The BTR shall consult with <u>Work Management Representative</u> (WMR) to identify the work management requirements and level of work controls appropriate for inclusion in the SOW based on the scope of work and potential impacts considering the items in Table A. Additional consultation with a qualified work planner could be appropriate if the work involve significant interface with existing utilities or facility.
- Ensure formal authorization for work release by including the use of the release document specified in the task order, contract, or other statement of work document. The release mechanism should be specifically stated in the TCA, contract or SOW to avoid misunderstanding when the field work begins. There are three mechanisms for work release within CHPRC:
 - the Work Release for Construction/Service Organizations form A-6004-967
 - via a work package developed within the CHPRC work management system.
 - For S&GRP Well Drilling only, via form A-6005-420
- The WMR ensures the BTR understands and conveys in the SOW the hazards associated with the work location, such as operating systems or equipment near or in the work area, and the protective measures to take or that have been taken to mitigate them.
- The BTR will ensure that the owner's requirements for work release and work control are fully understood and implemented by the supplying organization.

Owner responsibilities for input to the SOW and authorizing work:

- Work with the BTR to include necessary elements in the SOW such as job planning, work package planning, review, and release methods to the level necessary to ensure:
- The work scope is defined such that safe boundaries can be established prior to releasing the work.
- Communication channels between the owner and supplying organization are clear during the work.
- The owner's representative (RA) will be made aware of the workers' presence, the person in charge, and the respective work scope whenever they are on location within the area under control of the RA.

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- The RA must be able to, with confidence, release work activity that is compatible with the facility configuration at the time of release and for the anticipated duration of the task to be performed.
- The owner may choose to generate a work package in his work management system that "wraps around" the work of a supplying organization. This is generally done if there is considerable preparation required by the owner in order to allow the supplier to work safely.

The BTR and WMR shall consider the following expectations for the Supplying organization related to work control and determine whether to include elements in the SOW for the proposed work:

- Workers, including employees, subcontractors, and other agencies, understand the work scope, safety boundaries established for that work scope, and their responsibility and authority to stop work if conditions warrant. Such conditions include unclear direction, change in configuration, and uncertainties or changes in lock and tag conditions.
- The supervisor and workers know the lock and tag boundaries as they pertain to their work scope. They understand that they stop work if, during the course of the work, the tagout boundaries become inadequate.
- The supervisor knows who the work release authority is and the work control document that is to be used at a given facility or project.
- The supervisor and the worker understand the work scope and safety boundaries established for that work on the release document and any applicable work packages or related planning documents (such as the work management system or job safety analysis).
- When required to coordinate with facility management, the supervisor will maintain a copy of the work release document at the job site for the duration of the task covered.
- The supervisor informs the work release authority of work status at the end of the work period and obtains new releases for subsequent work periods. For work that has been released for the job duration, the supervisor informs the release authority of worker presence on the job on each day of activity.

Use of the Automated Job Hazard Analysis (AJHA) tool is required when developing "Self Performed" work packages as it triggers involvement by facility Subject Matter Experts (SMEs), Craft performing the tasks and identifies controls applicable to the work management process. Hazards and hazard controls from the AJHA are written into the work package work instructions to ensure each task performed includes hazard control measures appropriate for the assigned task.

Subcontract Job Safety Analysis (JSA) are utilized in lieu of the AJHA for Subcontracted work activities as identified by the SOW. Hazards and hazard controls from the JSA are written into the work instructions to ensure each task performed includes hazard control measures appropriate for the assigned task.

If HAMTC or other CHPRC personnel are required to support the contracted activity, use of the AJHA tool may be required by the facility to identify the hazards and controls associated with that part of the work.

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WORK PACKAGE DEVELOPMENT

If the BTR and WMR determine that a work package with planned work instructions (WI) is necessary, one will be developed either by a CHPRC qualified work planner, or as determined in the SOW. Subcontractor work that is not through EPC is only required to use a work package if so stated in the SOW.

Construction work within EPC is performed by either CHPRC Construction Forces (EPC, or "Self Perform") or Subcontractor construction forces. In either case, EPC will create a work package appropriate to the work scope unless EPC Management determines otherwise.

After determining which entity will perform the work, the flow chart below (Figure 1) is utilized to determine which work control documents and processes are followed to complete the work performance phase.

FIGURE 1

Type of Work	Contract Document	Work Instructions	Release Authority	Perform Work	Closeout Work
Subcontracted work NOT through EPC	• SOW • JSA	Per SOW (planned instructions, if required)	Project or Facility RA	Per SOW (use planned pkg, if prepared)	Per PRO- 186, 192
EPC Subcontracted Work	SOWJSACWAE	Planned WI per PRO- 12115 w/subcontract or input	Project or Facility RA,	Per planned work package	Per PRO- 12115 & 14990, A- 6004- 929.Submit LL
EPC-performed construction ("self-performed") & includes a utility tie-in or other facility interface	TCACWAEQCWorkPackage	AJHAPlanned WI	Facility RA	Per planned work package	Per PRO- 12115 & 14990. Submit LL
EPC-performed construction ("self-performed") w/o interfaces ("greenfield")	TCACWAEQC Work Package	AJHA Planned WI	Project RA	Per planned work package	Per PRO- 12115 & 14990. Submit LL

WI = Work Instructions

LL = Lessons Learned

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Table A - WMR/CM SOW Topics

These are topics for which the WMR and/or CM is considered the SME in developing a task order, contract, statement of work, or TCA. Other topics are addressed in the SOW Template and by the respective SMEs.

Communications

- Impacts to inner facility communications (PAX, radios, alarm signals, etc)
- Impacts to outside communications (phone lines, Fire Systems signals, emergency response mechanisms, direct lines to Patrol Operations Center, etc)

Emergency Preparedness

- Emergency Preparedness expectations are identified by the facility and communicated to the contractor.
- Trigger levels for changing condition, and appropriate actions to take should those levels be reached.

Hazardous Energy Control

Work requiring creation of a safe working boundary, or Hazardous energy work, per DOE-0336.

Nuclear/Criticality Safety

- Safety Basis of the Facility (LCOs, Administrative Controls).
- Structures, systems and components (SSC) designated as Safety Class (SC), Safety Significant (SS), Important to Safety (ITS), or defense-in-depth.
- Work occurring in or adjacent to a hazard category 2 or 3 nuclear facility.
- USQ screening and/or evaluation is required for all work at Hazard Category 2 or 3 nuclear facilities and for Transportation & Packaging involving >A2 quantities of radioactive material. See PRC-PRO-NS-062.

Plant Protection Systems

Repair or maintenance for protection systems such as Fire or HVAC used for radiological contamination control.

Quality Assurance

- Work involving quality, code or other technical aspects such as breaching an ASME coded boundary, taking monitoring equipment off line or disabling it via modification, welding inspection, etc.
- New installations or processes

Scheduling Requirements

Coordination of work schedules with associated facility/responsible landlord to lay out the job and assess interfaces with other scheduled work activities, utilization of facility personnel, equipment or system outages, etc.

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Supervision Oversight Requirements

- A CHPRC qualified FWS must be assigned to the job for all radiological work and any work performed in hazard category 2 or 3 nuclear facilities
- Expectations and interface between CHPRC FWS and contractor Foreman, Supervisor, CM or BTR
- Ensure contractor's staff understands the CHPRC FWS authority for their work at Hanford

Utilities (Electrical/Water/ Sanitary Sewer)

Impacts to facility utilities such as water, electrical or sanitary sewer.

- Backflow Prevention
- Breaching potable water systems (see Water Purveyor)
- Changes to electrical loading, supplies, etc.

Work Release Requirements

Impacts to facility operations, either structurally or the equipment associated with it, such as:

- System configuration management
- For D&D work, consider whether to require the plant or system owner to identify systems or items to be removed or demolished (paint, flagging, marking, etc.) by subcontractor or sub-tier contractor.
- Safe working boundary, such as lockout/tagout
- Work in a location under the release authority of a facility
- LCOs
- Frequency and method of release
- Communication of current release status

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Appendix I - Roles and Responsibilities of Critical Work Management Participants

This appendix summarizes the roles and responsibilities of participants who play a critical role in the work management process. In some cases, training and qualification requirements are stated. The functions and positions listed here are included in the appendix; this list serves as hyperlink to the respective test.

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ACCEPTANCE AUTHORITY (AA)

This person is designated by management, and must understand the facility or area well enough to be able to verify that the work performed is complete, and has preserved the design function of the SSC. In operating facilities, the AA representatives would typically be the same group as the Release Authorities or Controlling Organization. This person verifies that the retest and recovery has faithfully tested all aspects of the work that was done, including scope additions per a work change notice. See step 3.2.5.11.

AJHA COORDINATORS

The AJHA Coordinator is responsible to assist the work planning team with the mechanics of conducting the hazard identification and analysis while utilizing the AJHA tool in accordance with PRC-PRO-WKM-079. Specific responsibilities of the AJHA Coordinator include those duties related to performance of the hazard analysis utilizing the AJHA tool specified for the Planner.

These individuals are responsible to:

- Schedule AJHA meetings and run the software tool.
- Verify the identified reviews/approvals have been obtained on the AJHA
- Work with the Work Planner to assure that the controls identified are incorporated into the work instructions.
- At facilities where the AJHA Coordinator is responsible to facilitate the hazard identification and analysis discussions, additional training should be provided for the Coordinator to perform that function effectively.

Per PRC-PRO-WKM-079, the AJHA Coordinator is required to:

- Become familiar with the task and initiate the AJHA process.
- Using a graded approach, select and assemble a work planning team, knowledgeable of the work.
- Use facilitator skills to effectively lead the job hazard analysis process.
- Ensure that the assembly of an enhanced work planning team includes appropriate representation.
- Ensure effective completion of an AJHA session.

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DESIGN AUTHORITIES (DA), TECHNICAL AUTHORITIES (TA)

The Design Authority, DA, is an Engineer qualified and assigned as the responsible Design Authority by management. The roles, responsibilities, and qualification program for DAs are defined in PRC-PRO-EN-20051 and PRC-PRO-EN-1819.

The Technical Authority, TA, is the individual, designated by Function/Project Owner, with the necessary training and experience to provide technical responsibilities for various functions and activities within the work management process. The functions of the TA are not identified in engineering procedures.

If a process calls for an engineering signature, the person signing must be qualified as a Site Engineer or higher in accordance with PRC-PRO-EN-20051. DAs are responsible for their assigned Structures, Systems and Components (SSCs) until they are physically disconnected or permanently deactivated (all hazards removed).

Roles and responsibilities of the DA/TA in the work management process consist primarily of providing technical expertise. For Engineering functions, typically related to design issues and configuration management, these roles must be fulfilled by a qualified engineer. For other processes management may select a non-engineer as the TA. Persons who typically fulfill this role other than the DA could be, but are not limited to, Responsible Engineer, Cognizant Engineer, System Engineer, Fire Systems Maintenance (FSM) Engineer and Fire Protection Engineer, facility waste engineer, managers, solid waste specialist, etc.

Non-Engineering TAs who have been assigned to perform roles within the work management process should have instruction similar to that of the DA in the work management process, knowledge of review and approval expectations, other relevant CHPRC procedures, and project or facility procedures as they apply to the assigned scope of responsibility. It is the responsibility of the facility/project to establish a training program for TAs who are not engineers. For instance, PFP has developed qualification programs for TAs involved in work management and in procedure development. No site wide qualification program exists for TAs in the work management process, but the Training Selection Tool offers some guidance. The roles and responsibilities for TAs of procedures are defined in PRC-PRO-MS-589, and not applicable in this procedure unless specifically called out.

Responsibilities of the DA/TA in the work management process:

- Technical decisions concerning:
 - o procurement and fabrication,
 - o design and installation of equipment and processes
 - technical procedures,

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Technical input to allow other specialists to perform their functions in these areas:

NOTE: The parent procedure for each process referenced dictates whether or not the TA may act for the DA, or be a qualified engineer.

- Determination of Safety Class, Safety Significant, Important to Safety
- Criticality Safety Evaluation Reports (CSER), Criticality Prevention Specifications (CPS), HNF-7098
- Data Quality Objective (DQO) and Nondestructive Assay (NDA) calculations, PRC-RD-EN-10484
- o Environmental issues, PRC-PRO-EP-15333
- Unresolved Safety Question (USQ), PRC-PRO-NS-062
- Transportation and Packaging Safety (USQ), PRC-PRO- -NS-062
- Fastener issues impacting Suspect/Counterfeit Items, PRC-PRO-QA-301
- Mechanical lifting, hoisting, critical lifts, DOE-RL-92-36
- o Radiological Hazard Screening, PRC-PRO-RP-40108
- Work instructions preserving the design of the SSCs, repairs appropriate for the situation, retest appropriate for the work performed (PRC-PRO-EN-286), decisions to deactivate or reactivate certain work packages, etc.
- Periodic Maintenance, new activities, changes in frequency, permission for extensions, appropriate technical procedures, calibration values, appropriate instrumentation, etc, PRC-PRO-MN-19304, PRC-PRO-MN-490
- Modification to structures, systems, or components (SSCs), preparation of FMPs or decision to use the Configuration Management work package process, PRC-PRO-EN-2001, PRC-PRO-EN-20050
- Modification to processes that impact the design of that process (flow, temperature, pressure, configuration, etc.)
- Modification Impact Review (MIR) inputs
- Evaluation, selection and maintenance the adequacy of spare parts, MSC-PRO-140
- o Provide input to the Plant Forces Work Review (PFWR), process per PRC-PRO-IR-070
- Definition of scope to the detail necessary to allow adequate hazard identification and analysis to be conducted
- Job Hazard Analysis, PRC-PRO-WKM-079
- Determination of review and approval, Appendix L

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FIELD WORK SUPERVISORS

Field work supervisors (FWS) are required to meet the requirements set out in PRC-RD-WKM-8524, PRC-PRO-WKM-079, and this document, and to complete course 004240. Some facilities may impose additional qualification requirements. The following responsibilities apply:

- Determine if the work to be performed is skill-based, or beyond.
- Understand the safety basis limits specific to the work activity
- Verify that hazards have been identified and appropriate controls applied in work instructions.
- Ensure workers are provided with time to become familiar with the contents of the technical work instructions prior to starting the job.
- Ensure workers are trained and qualified to carry out their assigned activities safely.
- Conduct pre-job briefings to ensure those involved with the fieldwork understand their roles
 and responsibilities before commencing work. Communicate to affected workers the scope
 of work, and the hazards, requirements, and controls for the work to be performed.
- Keep team members informed of who is in charge.
- Ensure the prescribed control measures are implemented prior to start of work.
- Ensure that work is performed safely, productively, and in compliance with applicable procedures, and is protective of the environment. Conduct periodic assessments of job hazard analysis.
- Enforce strict compliance to Hold Point requirements in work instructions.
- Ensure the procedure change process is understood and implemented by those involved in the fieldwork according to applicable procedures.
- Take appropriate actions when a stop work order has been given.
- Monitor work progress and facilitate the needs of the work team.
- Resolve the issue if unexpected conditions are encountered, if the work area conditions
 have changed since the work activity was planned, or any situation arises that requires
 reanalysis of hazards or changing the WO.
- Address hazards properly when changing conditions occur.
- Document mid-job turnover when tasks must be continued from shift to shift or day-to-day, or if a task must be interrupted
- Conduct post-job briefings when required or appropriate. Where a post job review is conducted, solicit feedback/input on the job hazard analysis process.
- If work is successfully completed, verify completeness of the WDs and sign off for field work completion on the WD.
- Identify feedback that needs to be retained in the AJHA Activity Level Feedback Database.

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MANAGERS OF WORK CONTROL

- Managers whose employees include Work control Staff other than work planners are required to understand and provide management support of the Work Management process described in PRC-PRO-WKM-12115.
- Ensure that the administrative function of designating who has the responsibilities to perform key work management function has been performed and is maintained as personnel changes are made. These functions are described in Section 3.0 of this procedure.
- Support the Periodic Maintenance and Surveillance PM/S) processes described in this process.
- Support the daily and weekly scheduling processes, including the preparation of the Daily Release Sheet for Work Release by the Release Authorities.

MANAGERS OF WORK PLANNERS

- Managers whose employees include Work Planners must meet the qualification requirements specified in the Training Program Description (TPD) for Work Planning as Training Course # 100723. The TPD specifies the course contents. Documentation of the requirements is accomplished via the qualification card, Site Form A-6005-352.
- The person who fulfills the function of the work planning manager is responsible for the following functions in the work management process:
 - Integrated Safety Management (ISM) Core Functions and Guiding Principles and Environmental Management System (EMS) Core Elements,
 - Work with managers of other organizations to facilitate mutual cooperation during the work planning process in order to achieve the work instructions that provides direction to conduct work safely, correctly and efficiently. Distribute required reading and lessons learned as appropriate for the scope of work in the organization.
 - Support the training, qualification and mentoring of work planning personnel.

PM COORDINATOR

The individual in an organization who has the responsibility to use PM recall systems to generate PM WDs. If the PM Coordinator is responsible to order materials for the recall work, the facility shall provide procurement, e-BOM, P Card, or similar training. See PRC-PRO-MN-19304 for a list of responsibilities for the PM Coordinator.

At some facilities, the function of recalling the work activities and preparing paperwork to go to the field for work is performed by one person, and the technical aspects to prepare for that work (verifying current hazards analysis, permits, lockout/tagout, etc.) are performed by others. These functions might not all be performed by the same person, but it is the responsibility of facility management to assure that all of the functions are performed and to assign responsibility to available staff. Closeout and retention of the work record are also functions that must be assigned to appropriate individuals.

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RELEASE AUTHORITY (RA)

This person is authorized and designated by management to release work, that is, to authorize field work to begin. The field work has been presented for release in the form of a work document or work package prepared by this procedure. The RA must verify the proposed work complies with procedural requirements as well as to weigh all concurrent work, impacts to the facility and other specific points described in $\underline{\text{step 3.2.5.3}} - \underline{\text{3.2.5.5}}$. The RA is also the person who either performs the pre-work review in $\underline{\text{step 3.2.3.32}}$ or designates another to perform that review. Facilities and projects with an Operations qualification program typically include RA qualification as part of the overall program.

Two Release Authority designations are authorized.

- For RAs at facilities or who also serve as LOTO Controlling Organization, the RA designation is documented on site form A-6005-359 as ITEM course 170727.
- For RAs who do not authorize work at facilities and who do not perform LOTO CO functions, RA Designation is documented on site form A-6005-407 as ITEM course 170728.

SUBJECT MATTER EXPERTS (SMES)

An individual who by appropriate education, training and/or expertise is a recognized expert in a particular subject, topic, or system, and is identified and authorized to represent an organization or functional area for a specific topic or set of topics. Roles and responsibilities for SMEs are identified in the respective company procedures for each discipline, PRC-PRO-WKM-12115, and PRC-PRO-WKM-079.

- Review and approve documents that define processes, specify requirements, or establish design when necessary.
- Review documents, including revisions, for adequacy, completeness, and correctness before they are releases by authorized personnel.
- Participate with the planning team from initiation of planning through work order review or approval to promote work orders that can be performed in a safe and efficient manner.
 SMEs shall be involved with the work team in analyzing hazards and determining specific hazard controls. Assist in identifying and analyzing workplace hazards and selecting controls.
- Be involved Walk the job down, perform hazards analysis, and ensure appropriate controls are incorporated into the work instructions. Determine the need for and provide activity-specific details during selection of job hazard analysis controls.
- Serve as a technical resource for requirements and regulations.
- Periodically perform a technical review of the AJHA system (their topical area screens) to ensure content is current with CHPRC requirements.

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VALIDATION AUTHORITY (VA)

 This person is authorized by management to determine whether work described in new requests is worthy of being pursued further in the work management process. The VA will determine if the work is within the scope of the mission, whether it is a duplicate of existing requests, and what its priority should be if it is pursued. See <u>Section 3.2.2</u>.

WORK PLANNER

Planner is a general term for any employee who is trained and qualified to generate work instructions and assemble all necessary elements into work packages. The Work Planner has a major responsibility for implementation of the work management process, as well as the content, accuracy and completeness of work packages. Specific duties for the Work Planner are specified in PRC-PRO-WKM-079 and PRC-PRO-WKM-12115.

Planned work instructions must be generated by or approved by an individual who has completed the work planning qualification program, Course #170723. The Training Program Description (TPD) specifies the course contents. Documentation of the requirements is accomplished via the qualification card, Site Form A-6005-183.

The person who fulfills the function of the work planner is responsible for the following functions in the work management process:

- Integrated Safety Management (ISM) Core Functions and Guiding Principles and Environmental Management System (EMS) Core Elements,
- Ensure that the scope of work being performed is adequately defined, and broken down into discrete steps or tasks to facilitate critical planning and hazard analysis. This step may require input from others such as a consultation with the Design Engineer or Project Manager, or a job scoping walk down with a work team.
- Confirm that hazards associated with each discrete task and with the work environment have been identified and analyzed to determine the controls that must be implemented to ensure safe work performance and protection of the environment.
- Incorporate applicable work history (JCS), feedback (Activity Level Feedback Database), and lessons learned (HILLS/OPEX) into initial hazard identification.
- Ensure that initial and revised hazards and controls identified during job hazard analysis are incorporated into the appropriate WDs using the graded approach guidelines found in PRC-GD-WKM-12116, appendix M.
- Determine the applicable work process requirements based on the equipment or system on which the work will be done, the complexity of the task, etc.
- Apply applicable requirements, standards, permits, regulations, Quality Assurance Criteria;
 etc. to work planning (utilizing subject matter experts and system engineers);
- State the acceptance criteria for work performed (retest, surveillance). Incorporate a retest
 into the work instructions, as provided by the DA/TA, for those work tasks that are placing
 structures, systems or components (SSC) back into service.
- Assemble associated documents (permits, forms procedures, USQ, FMP, MIR, etc.) into a work package.

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- The roles, responsibilities, authorities, and accountabilities of interfacing organizations;
- Applicable work management system(s), i.e., types of work performed, processes used, tools, software, graded approach, how to apply lessons learned, etc.;
- Assist the Supervisor/Work Leader in determining the level of skill needed to perform a particular task.
- Consult with, and obtain support from workers and Technical Discipline SMEs (e.g., Rad Work Planner, Safety Professional, Environmental Professional), as appropriate, to confirm working conditions, hazards, and constraints.
- Contact the DA/TA to identify review and approval disciplines, determine if the work is a
 modification, provide input for various processes such as procurement, NDA, PFWR, USQ,
 scheduling, etc.
- Distribute the WO for review and resolve comments; Obtain approvals identified by the DA/TA.
- Screen work instructions against Hazard Review Board (HRB) criteria and obtain review and approval by the HRB, for work that triggers any criterion stated in PRC-PRO-WKM-40004.
- Assist work team in processing work change notices, as required.

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Appendix J - Beryllium Controlled Buildings

Most of the buildings that are under the authority of CHPRC have no history of beryllium usage or operations, and thus present no current beryllium hazard. However, a few of these facilities have evidence indicating that beryllium was used in the building in the past. These buildings have been designated as Beryllium Controlled Facilities and require special controls.

Within Beryllium Controlled Facilities, Beryllium Controlled Areas (BCA's) and/or Beryllium Regulated Areas (BRA's) must be identified and placarded. <u>All</u> work conducted within a BCA or a BRA must be done under a Beryllium Work Permit (BWP). BWP's can either be standing (covering multiple work activities) or job-specific.

Work may be performed in a BCA on a MWT or NPR if it meets the criteria in Appendix E and the work scope is appropriately covered by a standing BWP. IH approval should be documented that the BWP covers the proposed work activity. All work in a BRA must be planned using the enhanced work planning process.

Likewise, not all work in a BCA requires that an employee be a beryllium worker. Only beryllium workers are allowed to enter a BRA.

A list of the facilities that have been labeled as beryllium controlled facilities can be obtained by viewing the beryllium-web-page maintained by MSA or by contacting the POC for PRC-PRO-SH-6155.

If work will take place in a building that is not under CHPRC authority, the respective contractor must provide information relative to the potential of beryllium exposure in that location.

See PRC-PRO-SH-6155 and DOE-0342 or contact your local Industrial Hygiene representative for additional information.

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Appendix K - D4: Deactivation, Decommissioning, Decontamination, and Demolition

PURPOSE

The purpose of this appendix is to provide a foundation for the consistent application of terms and thus define points along the D4 continuum at which the PRC may consistently apply a graded approach to the various requirements that govern PRC work. Direct quotes from relevant documents are generally indicated by bullets. Numbered steps in this appendix represent direction on applying the graded approach to the work management procedure described in the body of this procedure.

INTRODUCTION

When DOE identifies that a program mission is no longer required, the contractor must initiate preparation of affected real property assets for disposition, including potential reuse for other missions. Disposition and Long-Term Stewardship (LTS) activities must be consistent with the guiding principles and core functions of the Department's integrated safety management and facility disposition policies. The phases of this process are Deactivation, Decommissioning, Decontamination and Demolition (CRD O 430.1B, Section A. 6. Disposition and Long-Term Stewardship). This process applies to Nuclear Facilities, Radiological Facilities, Industrial Facilities and General Purpose Facilities.

As DOE facilities complete mission operations and are declared excess, they pass into a transition phase which ultimately prepares them for disposition. The disposition phase of a facility's life-cycle usually includes deactivation, decommissioning, and surveillance and maintenance (S&M) activities.

Four DOE Guides were developed to provide implementation guidance for requirements, found in <u>CRD O 430.1B</u>, <u>Real Property Asset Management</u>, specific to the transition and disposition of contaminated, excess facilities. The Guides are:

- DOE G 430.1-2, Implementation Guide For Surveillance And Maintenance During Facility Transition And Disposition;
- DOE G 430.1-3, Deactivation Implementation Guide;
- DOE G 430.1-4, Decommissioning Implementation Guide, And
- DOE G 430.1-5, Transition Implementation Guide.

The goal of the processes described in the Guides is a continuum of hazard mitigation and risk reduction throughout the transition and disposition phases, leading to a timely, cost-effective disposition of the facility. These DOE guides have served as the basis for this appendix.

As the CHPRC projects continue to drive toward their respective mission end points, we need a common understanding of these phases of D4 in order to apply the graded approach to all the interfacing processes. In work management, these definitions will be used as a foundation to develop criteria that will allow us to consistently amend our rigor in the application such programs as configuration management, modifications, levels of reviews and/or approvals, labeling, LOTO, etc.

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The terms D&D and D4 are used interchangeably in common vernacular. Both refer to the sequence of activities that must occur for the disposition of real property after DOE has determined that the respective program mission is no longer required.

1.0 Surveillance and Maintenance, S&M

S&M activities are conducted throughout the facility life-cycle, including when a facility is not operating and is not expected to operate again. During these last periods of a facility life-cycle, it is important to ensure that S&M is adequate to maintain the facility safety envelope during the final stages of operations through a seamless transition to the final disposition of the facility. S&M is adjusted during the facility life-cycle as transition; deactivation and decommissioning activities are completed. S&M activities include periodic inspections and maintenance of structures, systems, and equipment to ensure, at a minimum, that there is adequate containment of any contamination and that the potential hazards to workers, the public, and the environment are eliminated or mitigated and controlled.

For projects where no logical delineation between deactivation and decommissioning exists, the requirements are integrated to serve the overall project and completion objectives. In doing so, planning considers the possibility of future changes to priorities and should identify the conditions (end-points) where a project may be safely and efficiently slowed or accelerated, if it becomes necessary to do so.

Prior to decommissioning, the facility typically will be in a stable and known condition maintained through a surveillance and maintenance (S&M) program. For deactivated facilities, this will have been established at the completion of deactivation and accomplishment of the deactivation end state, as described in DOE G 430.1-3, Deactivation Implementation Guide.

2.0 Deactivation

Following operational shutdown and transition, the first disposition activity, usually, is to deactivate the facility. The deactivation mission is to place a facility in a safe shutdown condition that is economical to monitor and maintain for an extended period, until the eventual decommissioning of the facility. Deactivation of contaminated, excess facilities should occur as soon as reasonable and for as many facilities as possible. In this way, DOE can apply its resources to accomplish the greatest net gains to safety and stability in the shortest time. Deactivation can accomplish various activities, placing the facility in a low-risk state with minimum S&M requirements.

- Deactivation. Placing a facility in a stable and known condition including the removal of hazardous and radioactive materials to ensure adequate protection of workers, public health and safety, and the environment, thereby limiting the long-term cost of surveillance and maintenance. Actions include the removal of fuel, draining and/or de-energizing nonessential systems, removal of stored radioactive and hazardous materials, and related actions. Deactivation does not include all decontamination necessary for the dismantlement and demolition phase of decommissioning (e.g., removal of contamination remaining in the fixed structures and equipment after deactivation). (DOE O 430.1B)
- Deactivation is the process of placing a facility in a stable and known condition, including the removal of hazardous and radioactive materials. (10CFR830 App. A to Subpart B of Part 830, E.5 Table 3)

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A "deactivated" system or subsystem is one that has been removed from service, has had all external energy sources physically disconnected, and is totally divorced from the operating plant systems.

- 1. A detailed work package and Facility Modification Package (FMP) will be used to "deactivate" the system or subsystem from the plant/facility/building.
- 2. The FMP makes changes to the configuration baseline documents to show isolation points for mechanical and electrical components.
- 3. If the project has maintained databases in the Job Control System (JCS), it is appropriate, although not required, to perform the following activities in JCS:
 - Component Index is changed to reflect the status of all deactivated components.
 - o Preventive Maintenance and Surveillance (PM/S) activities are changed to inactive.
- 4. Depending on the complexity of the project and the projected length of the mission, it could be prudent to develop a system deactivation summary at designated milestones, such as at the completion of deactivation for each system, or parts of system, depending on the project plan.

When all the electrical and mechanical sources of hazardous energy to a building or facility have been eliminated, it is referred to as "cold and dark."

3.0 Decommissioning

The final facility disposition activity is typically decommissioning, where the facility is taken to its ultimate end state through decontamination and/or dismantlement to demolition or entombment. After decommissioning is complete, the facility or surrounding area may require DOE control for protection of the public and the environment or for environmental remediation.

- Decommissioning. The process of closing and securing a nuclear facility or nuclear materials storage facility to provide adequate protection from radiation exposure and to isolate radioactive contamination from the human environment. It takes place after deactivation and includes surveillance, maintenance, decontamination, and/or dismantlement. These actions are taken at the end of the life of a facility to retire it from service with adequate regard for the health and safety of workers and the public and protection of the environment. The ultimate goal of decommissioning is unrestricted release or restricted use of the site. (DOE O 430.1B)
- Decommission To remove a nuclear facility or site safely from service and reduce residual radioactivity to levels that permit release of the facility or site for unrestricted use and termination of any applicable license. (NQA-1 – 2008)
- Decommissioning Those actions taking place after deactivation of a nuclear facility to retire
 it from service and includes surveillance and maintenance, decontamination, and/or
 dismantlement. (10CFR830 App. A to Subpart B of Part 830, E.5 Table 3)
- Decommissioning activities at facilities located on DOE sites will be conducted as non-time
 critical removal actions under CERCLA, unless the circumstances at the facility make it
 inappropriate. The decision to decommission a DOE facility may result from discovery of a
 release or substantial threat of release of hazardous substances at the facility, or may
 simply be a programmatic decision to go forward with decommissioning. In either case, a
 reasoned evaluation will be needed to justify the decision.

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Decommissioning includes all activities that occur after the deactivation for those buildings, portions of buildings, structures, systems or components in which deactivation occurs

Decommissioning is an umbrella term that applies to all the phases after deactivation until demolition and waste disposition are complete. After deactivation, the following deviations may be made from the standard work management process described in the body of PRC-PRO-WKM-12115:

- Removal of deactivated components can be done without tagouts since the system or subsystem has been isolated from the operating plant, that is, there is no potential for hazardous energy.
- Work packages will be used to control D&D activities, but individual FMPs are not needed to remove equipment that has been shown to have an "air gap" from any plant, facility, or hazardous energy sources. During the equipment removal stage, the system DA will monitor progress as necessary and update engineering documentation as required in PRC-PRO-EN-20050.
- 3. The project manager may approve work packages and other documents that previously required the signature of a qualified engineer.

4.0 **Decontamination**

- Decontamination The reduction or removal of radioactive contamination from a structure, area, object, or person. (NQA-1 – 2008).
- Decontamination is the removal or reduction of residual radioactive and hazardous materials by mechanical, chemical, or other techniques to achieve a stated objective or end condition. (10CFR830 App. A to Subpart B of Part 830, E.5 Table 3)
- Decontamination. The removal or reduction of residual chemical, biological, or radiological contaminant and hazardous materials by mechanical, chemical or other techniques to achieve a stated objective or end condition.(DOE O 430.1B)

Decontamination removes or eliminates hazards that are not permitted to be part of the building waste after demolition, such as refrigerants, oils, batteries, PCB ballasts, asbestos, mercury switches and hazardous chemicals. It is the removal or reduction of radioactive or hazardous contamination from facilities, equipment or soils by washing, heating, chemical or electrochemical action, mechanical cleaning or other techniques to achieve a cleaner stated objective or end condition.

- 1. The activities listed on the *Pre-Demolition Checklist*, Site Form A-6004-622, may begin during any phase, but must be completed prior to demolition.
- 2. During decontamination, the structure, system or area under consideration is placed in a Surveillance and Maintenance (S&M) mode to ensure that the residual hazards do not harm workers, the environment or the public. ES&H procedures apply. Work Site walk downs are imperative, as are thorough pre-job briefings, and the awareness of changing work place conditions.

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5.0 Demolition

The plant or system owner identifies items or systems to be removed or demolished. Such items or systems identified conspicuously by paint, flagging, marking, etc., to the mutual satisfaction of the subcontractor and the owner prior to removal or demolition. If demolition will be performed by a subcontractor or sub-tier contractor, normal contractual agreements will be developed.

- Disposal. Permanent or temporary transfer of DOE control and custody of real property assets to a third party who thereby acquires rights to control, use, or relinquish the property. (DOE O 430.1B)
- End Point. The detailed specification of conditions to be achieved for a facility's spaces, systems, and major equipment. Fundamental to the determination of end points is risk reduction through elimination or stabilization of hazards, effective facility containment and facility monitoring and control. (DOE O 430.1B)

Prior to demolition, the FWS must work with respective SMEs to complete a *Pre-Demolition Checklist*, Site Form A-6004-622.

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Appendix L - Review and Approval of Work Management Documents

In all cases, the reviewer is responsible for ensuring that the intended activity can be performed safely and within the constraints of the reviewer's technical discipline. Signatures are not required from the reviewers except for the Design Authority approving the content of the work package. JCS documents reviewers.

Review and approval of the content of the Work Management Document does NOT approve work initiation; pre-work review and work release processes are unchanged. Only the Release Authority may authorize field work to begin. See <u>Section 3.2.5</u> of this procedure for details.

- For planned work instructions, the DA/TA shall review the instructions and designate other reviewers. The Planner or Work Control Staff may assist the DA/TA in routing the instructions for review and incorporating comments.
- The DA/TA will approve the final instructions, ensuring all appropriate reviews are conducted and comments are adequately dispositioned.
- For work instruction changes, only those disciplines affected by the change must review it; the DA/TA determines who must review any changes. Minimum review for work instructions are the DA/TA (or PM for cold & dark work), FWS and RA (unless work is suspended).
 - Reviewers of formal changes will be documented in JCS;
 - Reviewers of direct changes will be documented on the Work Record.
- * For each review discipline, it is preferred that a Subject Matter Expert (SME) who is closer to the project reviews the document. If no SME in the specific review discipline is assigned to the project or the project SME is unavailable, then the functional group manager or Technical authority shall review the document.

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Review Discipline	JCS Code	REQUIRED		
Design Authority/ Technical Authority	DA/ TA	ALWAYS – Signature required		
Or	Or	DA/TA for all work up until decommissioning		
Project Manager	PM	Or Project Manager for Cold and Dark Decommissioning Work		
Release Authority	RA	Always – for planned instructions (via normal pre-work review and work release) Always - for changes to work instructions while work package is released. (If package is suspended, normal pre-work review and release process will suffice.)		
Fieldwork Supervisor	FWS	Always - for changes to work instructions.		
Radiological Control Organizations	R	Work that meets the definition of radiological work per the Glossary of CHPRC-00073, CH2M Hill Plateau Remediation Company Radiological Control Manual		
Occupational Safety and Industrial Hygiene	I	Work with the potential to contain hazardous energy, hazardous substances, or other occupational/industrial hazards (other than radiological hazards).		
Fire Protection Engineer or Hanford Fire Marshall	F	Work affecting fire protection systems or processes, including those that are credited in the DSA. All modifications. All D&D work, until determined unnecessary for a specific project or building by the FPE.		
Criticality Safety	CS	Work affecting fissionable material processes or limits.		
Nuclear Safety / Safety Analysis	N	Work at hazard category 2 or 3 nuclear facilities. Work affecting safety systems or processes credited in the DSA, including fire protection, if applicable. Work related to Transportation & Packaging that involves greater than A2 quantities of radioactive material.		
NOTE: This review is performed by the Safety Analysis group within the PRC Nuclear Safety organization.				

Safety organization.

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Review Discipline	JCS Code	REQUIRED
Environmental Program and	Е	Work affecting environmental permits or the potential for environmental releases.
Regulatory Management		Work that affects environmental aspects, targets or objectives for the respective project.
Quality Assurance	Q	Work affecting Safety Class/Safety Significant systems' primary functions.
		Work affecting or in accordance with regulatory permits.
		Work where QA Hold Points or inspections are required.
		Work on Type A or higher packaging (Transportation & Packaging) other than routine preventive maintenance.
Hoisting and Rigging	HRTA /HRE/ OSR	Work involving hoisting and rigging activities defined as "critical lift", by the Hanford Site Hoisting and Rigging Manual (DOE-RL-92-36).
Site System-Specific SMEs	WP SW EU	Work affecting Site service systems such as: Potable WaterSewer SystemsElectric Utilities
Safeguards and Security	SAS	Work related to control and accountability of special nuclear materials (SNM), including measurement, transfer, and inventory.
Waste Management	W	Work with the potential to generate, package or transport hazardous, radioactive and mixed waste.